



NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

**NAVY COMBATIVES:
ADJUSTING COURSE FOR THE FUTURE**

by

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December 2010

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REPORT DOCUMENTATION PAGE			<i>Form Approved OMB No. 0704-0188</i>	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE December 2010	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE Navy Combatives: Adjusting Course for the Future			5. FUNDING NUMBERS	
6. AUTHOR(S) Junior Charles Lorah				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB Protocol number ____N.A.____.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
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14. SUBJECT TERMS Military Combatives, MAC, MCMAP, AFCP, Navy Self-defense Program			15. NUMBER OF PAGES 113	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UU	

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NAVY COMBATIVES: ADJUSTING COURSE FOR THE FUTURE

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN DEFENSE ANALYSIS

from the

**NAVAL POSTGRADUATE SCHOOL
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ABSTRACT

The purpose of this research is to identify if there is a need for combatives training in the United States Navy. Historically, there would not be a need for a Navy Self-Defense Program. However, the operating environment has changed. The mission of the Navy is changing. The battlefield, which has typically been largely a one-dimensional front led by the United States Army, requires a more dynamic, all-encompassing approach. Emerging oppositions, and increased military commitments on a global scale, expanded the roles of all service members. The most dramatic change is to the Navy Sailor. Servicemen, in particular Sailors, are being assigned to non-traditional tasks. Ten years ago, this was not the case. However, with 9/11, the Navy's role has changed. The Navy has historically lacked in this type of training. Currently, limited training in self-defense is provided. The Navy has no proactive plan for the future. Hand-to-hand combat training for the Navy is completely overlooked. The Army Modern Combatives Program (MAC) and Marine Corps Martial Arts Program (MCMAP) were developed out of the need for a standardized system to train and develop warriors. The Air Force Combative Program (AFCP) was born from the MAC mold, recognizing a need to enhance fighting capabilities. On an international level, Israel and Russia developed programs for similar reasons. MCMAP is the recommended program to introduce combatives to the U.S. Navy. From there, the U.S. Navy can develop a program that is tailored to the different job specialties available. Core facilities are available in key Navy ports throughout the world that can provide a training ground for Navy combatives. From a cost-benefit look at combatives, this thesis argues that the benefits outweigh the costs. Injuries will occur in combatives, but the benefits to teaching combatives outweigh these costs. Providing a self-defense program helps develop and enhance the overall skills of a Sailor. Additionally, self-defense training might help a Sailor recognize weaknesses and vulnerabilities. Most importantly, combatives enhances the qualities of the Navy Core Values in every Sailor.

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LIST OF ACRONYMS AND ABBREVIATIONS

AETC:	Air Force Education and Training Command
AFCP:	Air Force Combatives Program
ASBC:	Air and Space Basic Course
BJJ:	Brazilian Jiu Jitsu
CNO:	Chief of Naval Operations
CSAF:	Chief of Staff Air Force
EOD:	Explosive Ordnance Disposal
IA:	Individual Augmentee
LINE:	Linear Infighting Neural Override Engagement
MAC:	Modern Army Combatives
MACE:	Marine Corps Center of Excellence
MCMAP:	Marine Corps Martial Arts Program
MMA:	Mixed Martial Arts
MOS:	Military Occupation Specialty
NECC:	Naval Expeditionary Combat Command
OCS:	Officer's Candidate School
ORM:	Operational Risk Management
OTS:	Officer Training School
ROK:	Republic of Korea
ROTC:	Reserve Officer Training Corps
SAC:	Strategic Air Command
SAMBO:	Samozashchitya Bez Oruzhiya
SEAL:	Sea Air Land
UDT:	Underwater Demolition Team
USNA:	United States Naval Academy
VBSS:	Vessel, Board, Search, Seizure

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ACKNOWLEDGMENTS

A project like this is impossible to complete without the help of several key figures. First, I would like to thank Professor Douglas Borer who originally assisted and motivated me with my thesis proposal research question. Next, I would like to thank Dr. Richard Schmidt, from the University of Nebraska for his enormous incite of combatives history. A thesis in military combatives is not complete without the help of the current combatives directors for each branch; I would like to thank Mr. Matt Larsen, Mr. David Durnil, and Mr Joseph Shusko. Mr Shusko was invaluable with his tireless responses to my emails, as well as an enthusiastic host to my family and me, at the MCMAP Center in Quantico, Va. Semper Fi Colonel! Mr Durnil provided me with valuable information in regards to the Air Force Combatives Program. Army Specialist Elizabeth Black must be mentioned for my constant nagging of Army combatives historical data. Also, Mr Eric Howard provided me with key data of Army Combatives that I am very grateful for. Additionally, to all my martial arts teachers, thank you for your wisdom, and guidance throughout the years. Thanks to my thesis processor, Ms. Janis Higginbotham, she had the patience to correct my poor writing. To my thesis advisors, you both made this experience for me enjoyable. Professor Frank Giordano, you are the man. You taught a dumb prior enlisted Sailor the techniques of game theory and made it enjoyable. A huge thanks to Professor Leo Blanken, the best boxer I know, I am forever grateful for your patience and calmness through this whole evolution. I learned a great deal from you. As always, I thank my loving wife, Elizabeth, who has always kept me on course through the most difficult times. Without her, this thesis would have never been written. Finally, this thesis is dedicated to all my brothers and sisters in the Navy Explosive Ordnance and Diving community. It has been humbling, and an honor to serve. Hoo-Yah!

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I. HAND-TO-HAND COMBAT: BUILDING THE COMPLETE SAILOR

Close combat is the oldest form of combat known to man. As man progressed, so did his methods of combat. But no matter how technical or scientific warfare becomes, there will always be close combat. When modern weapons fail to stop the opponent, man must rely on their close combat skills.

— United States Marine Corps, Close Combat Manual

A. UNARMED COMBAT: NOT JUST FOR THE ARMY

The United States military has evolved from pre-9/11. Historically, the U.S. has depended on the Army to take the brunt of land combat operations. The U.S. Marine Corps was tasked with amphibious operations, while the Air Force and Navy supplied the air and naval power. The primary duties of each branch remained largely intact. However, the wars in Iraq and Afghanistan remind the U.S. military that the concept of joint operations must be embraced by each service. The four service branches of the U.S. military are less individual entities in warfare. Each service is relied upon to work together to share the brunt of combat operations.

With the current wars in Iraq and Afghanistan, the U.S. Army does not possess the manpower to operate in both areas on its own. The Air Force and Navy provide augmentation personnel to assist the Army in the war effort. This augmentation has put both Air Force and Navy personnel in harm's way. Specifically, individual augmentation places Air Force and Navy personnel in the position to possibly engage in close combat with the enemy. Before 9/11, the Navy and Air Force were not typically tasked with this assignment. This is an example of crossing over, and a stronger example of the changing landscape that defines the future of U.S. military operations. To counter this tasking, the U.S. Air Force focused on programs to train its personnel in ground fighting skills. In particular, the Air Force established a program to develop the Airman's skills in hand-to-hand combat fighting. The Air Force uses a mixture of reactive and proactive thinking to help better prepare its Airmen for the future, while the U.S. Navy remains deficient.

With the ever-changing landscape of warfare, and the increased focus on joint operations, it is necessary for the Navy to recognize its deficiency in the arena of hand-to-hand combat. Currently, the U.S. Navy is void of a standardized combatives program. Of the four military services that make up the Department of Defense, the U.S. Navy is the sole service without a standardized program. This thesis focuses on the need for the United States Navy to create a self-defense program. Using the successful development and implementation of the United States Army Modern Army Combatives (MAC) Program, the developing Air Force Combatives Program (AFCP), and the Marine Corps Martial Arts Program (MCMAP) as templates, with international military combative programs as additional examples, this thesis analyzes the success of standardized military self-defense programs. Additionally, this thesis briefly details the efforts of non-state actors and their attempts to kill or kidnap servicemen during the wars of Iraq and Afghanistan. Through all this evidence, we can paint a clear picture as to why the Navy needs a self-defense program.

In conclusion, the United States Navy needs a standardized self-defense program to provide Sailors the tools necessary to defend themselves in a hostile situation. As a positive side effect, this program will enhance each Sailor's development of the core values of honor, courage and commitment. As Admiral Roughead explains in his Chief of Naval Operations (CNO) guidance for 2010,

We have over 50,000 Sailors stationed around the world. 13,000 of these Sailors are on the ground. One key tasking of the US Navy is augmenting ground forces to the war-fighting effort. In addition, Navy SEAL and EOD teams are still utilized in direct action, frontline situations.

One question that requires an answer from the CNO's guidance is: What are we doing to prepare our Sailors for increased ground combat?

B. STATEMENT OF PURPOSE AND SCOPE

The purpose of this thesis is to answer the question: Does the U.S. Navy need a standardized self-defense program? Also, if a standardized program is developed, what should it look like? These are topics of debate in the Navy. Certainly, on an historical

level, and when compared to other military branches, the need for s to defend themselves in hand-to-hand combat was minimal. This must be a point of consideration when making an argument in favor a standardized program. The Iraq and Afghanistan Wars created a new era of combat that requires the total focus of a combined military front, i.e., joint operations. As the U.S. military enters a new era of increased joint operations, we need to address how this affects the soldier, Sailor, or airman on the battlefield.

The scope of this thesis is focused on the U.S. military and several international military forces with established combatives programs. Presumably, there is a need for self-defense training inside the military. Within the U.S., the Army, Marine Corps, and Air Force embraced the need for a standardized program. There is little argument that at the elite combat level of the military, units that see the brunt of direct action certainly should dedicate training time in the development of hand-to-hand to combat. In regards to the U.S. Navy, the elite SEAL (Sea, Air, and Land) and EOD (Explosive Ordnance Disposal) teams, bear the U.S. Navy load of frontline combat in the joint operations mission. Questions that need to be answered are: at what level, at what complexity, and more important, which units in the U.S. Navy should receive training? Additionally, an examination needs to be made in regards to the effects a self-defense program has to the fighting spirit. How does a self-defense program help morale and character development? Presently, these questions have not been answered. This thesis attempts to provide answers that substantially answer the thesis question.

C. BACKGROUND

Historically, there was negligible need for a standardized U.S. Navy Self-defense Program. However, the operating environment has changed. The mission of the Navy is changing. The battlefield, which has typically been largely a front led by the United States Army, is more dynamic, requiring an all-encompassing approach. Emerging oppositions and increased military commitments on a global scale expanded the roles of all service members. The most dramatic change is to the Navy Sailor. Servicemen, in particular, Sailors, are being assigned to nontraditional tasks. No longer are Sailors solely charged with duties aboard warships. Multiple wars placed both Navy SEALs and EOD

teams in the forefront of direct combat operations. Military augmentation plans tasked fleet Sailors on assignment to combat zones. Additionally, along with these duties, the United States Navy still requires Sailors to stand watch aboard warships, as well as maintain roving base security and shore patrol. These tasks all require the ability of a Sailor to defend from oppositions.

Currently, standardized training in self-defense is not provided for the United States Navy. The Navy has traditionally overlooked combatives type training. Even our current SEAL (Sea, Air, and Land) and EOD (Explosive Ordnance Disposal) teams, who share the brunt of frontline operations, do not receive adequate training. Additionally, the Navy has no proactive plans for the future in establishing a standardized program.

This thesis starts to answer the Navy self-defense question by analyzing the United States Marine Corp, Army and Air Force combatives programs, in particular, why each program was developed and standardized for its respective military branches. The second critical research addresses the foreign combatives systems of Russia and Israel. The intent of this critical research is to explore the reason each program was developed, and how it can relate to U.S. Navy's combatives needs. A third critical research area explores the non-state actor side of combatives with a look at their combatives training. In particular, the third critical research focuses on Al Qaeda and other 21st century terrorist organizations. The final critical research discusses the current employment of the Navy throughout the globe. Through successful combatives programs already in place throughout the world, we can use these examples to conclude why the U.S. Navy needs a self-defense program.

D. RESEARCH QUESTION

Given the amplified focus of joint operations and the increased intensification of U.S. Navy Sailors assigned to the battlefield, does the United States Navy need a standardized self-defense program?

E. HYPOTHESIS

A standardized U.S. Navy Self-defense Program is a necessary addition to the fleet training curriculum that provides a Sailor a critical tool to survive in a hostile situation. Additionally, the Navy Self-defense Program increases the overall physical fitness of a Sailor, and develops the core value elements of honor, courage and commitment. Areas such as: discipline, awareness and self confidence increases with consistent self-defense development. A standardized Navy Self-Defense Program is designed in such a way to evolve: as enemy tactics and techniques evolve, the Navy self-defense program will also evolve. Navy self-defense Instructors, students, and battlefield veterans will provide input to improve the program.

In the area of cost benefit, the Navy Self-Defense Program has some risks. In particular, the cost takes place in the area of combative related injuries. Injuries will occur. In hand-to-hand training, it is inevitable. However, despite injuries, the additional warrior skills that a combatives program instills greatly outweigh this cost. This program provides Sailors much needed specialized instruction that has been absent from United States Navy training courses.

F. LITERATURE REVIEW

Countless articles detail the tactical side of combatives (how to punch, how to kick someone). Unfortunately, there is no definitive manual that details the development process. In combatives manuals, there are two sections: the why and the how. The why, is a very brief description of the history and development of a system. The how, is the techniques of the program. The primary focus of each manual is on “the how”.

Literature review for the development of military programs is very limited. The Army combatives field manual only has a few paragraphs dedicated to the creation of their combatives program. The U.S. Marine Corps is similar in regards to historical documentation. The general theme for all articles involving the need and development of a military self-defense program is the same. Basically, there is a need for a consistent program that amplifies the combat capability of their servicemen. The Air Force went over a half century without a program. The Marine Corps and Army went over two

centuries without a consistent program. Through this long struggle to establish something substantial, only a few sentences explain the struggle.

Appendix B contains a list of combatives manuals used for the research of this thesis. Through this research, we can piece together a solid thesis on why combatives programs are created. Additionally, we can use the justification to determine if the U.S. Navy needs a combatives program.

G. METHODOLOGY AND CHAPTER SUMMARIES

This thesis uses historical information to answer the research question. In Chapter II, we discuss that three out of four military branches in the United States provide service members with a standardized self-defense program. A significant question that needs to be answered is why each program was developed. Once this question is answered, a connection can be surmised as to why or why not the United States Navy is absent of one. First, the research provides an historical overview prior to each programs development. Second, the research focuses on the development of the present programs, specifically concentrating on why there was a need for each program.

In many cases, the need for a self-defense program is obvious and welcomed. However, its implementation into the military machine is sometimes difficult. Third, we discuss what obstacles and challenges were faced when proposing a program. Obstacles and challenges to include:

1. Implementation (How a program is implemented)
2. Organizational Concepts (How a program is organized)
3. Administrative Details (Who provides funding, equipment, locations, and who runs the program)
4. Training Doctrine (Who is trained, when are they trained, and how often are they trained)
5. Risk Assessments (What are the injury risks)

6. Political Obstacles (Did a new program compete with older or previously established concepts?)

Fourth, after we address the obstacles and challenges, we discuss future challenges and the way ahead. This section of the critical research addresses what is being done to maintain each program, and what is being done for future development and prosperity. Finally, each program was developed to provide a special skill to improve the capabilities of the service member. This section details what effects each self-defense program has on the individual. Individual qualities to include:

1. Combat Readiness
2. Physical Readiness
3. Morale
4. Character
5. Confidence

Chapter III discusses international influence. Carrying over key variables from Chapter II, Chapter III briefly details the international combatives programs of Russia and Israel. Using the same research methodology, we cover:

1. Historical Overview: Life prior to combatives
2. Development
3. Obstacles and Challenges
4. Current Challenges and the way ahead
5. Positive and Negative impact on the service members

It is necessary to study not only the United States military but international militaries to determine a comparison. One independent variable that can be discovered through this research is what other Navies provide in regards to hand-to-hand combat training for their Sailors.

In Chapter IV, we focus on the United States Navy. This study first describes the history of the United States Navy in regards to hand-to-hand combat. Second, we provide an overview of the Navy's current commitments throughout the world. To include the wars in Afghanistan and Iraq, the United States Navy fleet is tasked with missions around the globe. Additionally, as we mentioned previously, not only is the Navy tasked with increased responsibility in the frontlines, the Navy is required to maintain its traditional duties. These duties include:

1. Master at Arms, security duties
2. Watch-standing (Gate and Shipboard Watches)
3. Shipboard Reaction Teams (Vessel Boarding and Inspection)
4. Shore Patrol

With wartime responsibilities, in addition to traditional Navy tasks, what is the strategic plan for the future of the Navy? Third, as we address the risks that current Sailors face, what programs are available to develop combat skills? What programs in the past were created, and why were these programs removed? Finally, if the Navy is the only service without a standardized program, what obstacles and challenges prevent the Navy from moving forward to develop a program? This answer might be as simple as, "the Navy does not require a program since the likelihood of a Sailor needing such skills is minimal and not cost effective."

In Chapter V, the War in Iraq and Afghanistan has been an evolving battlefield. Both coalition and enemy forces play a long, deadly chess match, which has been constantly changing at rapid pace. Non-state actors use many tactics to wound or kill United States servicemen. However, how have they fared against the United States military one on one, in a hand-to-hand combat situation? What skills does the enemy have? What circumstances placed United States forces in harm's way, in particular, a hand-to-hand combat situation? Due to the difficulty obtaining research information, the data is limited on this subject. We attempt to answer these questions:

1. What training does the enemy receive?
2. One on one situation with the enemy: How has combatives helped?

The data in this chapter may provide a reasonable argument as to why the Navy should dedicate the effort to develop a self-defense program.

Several international armed forces train in the skill of hand-to-hand combat, not only provide survival techniques, but also to develop moral character and physical fitness. The Army, Marine Corps, and Air Force all possess combative program that advertise the development of the warrior spirit. Despite a lack of combat for the majority of service personnel, self-defense is still considered an essential part of the soldier, airmen, and marines' training and development. As a conclusion, Chapter VI offers a way ahead in the development of a standardized combative program for Navy.

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II. THREE OUT OF FOUR AIN'T BAD!

A. INTRODUCTION

Two reasons are repeated throughout this thesis to justify the creation of a combatives program. The first reason deals with survival in combat. The second reason, articulated in different ways by each combatives program, is creating an individual mentality that is ready for combat. In this chapter, we focus on United States military combatives programs. Each program was created to teach servicemen survival skills, and to develop a warrior-like mentality.

B. UNITED STATES ARMY

The mission of the U.S. Army Combatives School is to train Leaders and Soldiers in close quarters Combatives in order to instill the Warrior Ethos and prepare Soldiers to close with and defeat the enemy in hand-to-hand combat.

— Mission Statement of Modern Army Combatives
(U.S. Army, MAC Homepage)

1. Brief History

Prior to the development of the Modern Army Combatives (MAC) program, the Army had little to show in the area of standardized hand-to-hand combat training. Until then, hand-to-hand combat training was event and unit inspired. From the Army's early battles, until the mid 1990s, hand-to-hand combat training was largely considered an afterthought. During each major war, hand-to-hand combat training was emphasized by units that required training. Once the war or conflict was over, the training was pushed aside or removed to make room for other training programs that were deemed necessary.

Prior to MAC, the training provided was based on what instructors were available, and were willing to teach. This meant the training was not necessarily appropriate for the needs of the unit. Often, martial arts styles were too traditional. The instruction did not teach realistic techniques in battle. The combatives instructors were often traditional martial arts teachers who never faced combat themselves. On other occasions, combat

hardened instructors taught techniques that became outdated as the battlefield and the enemy changed. A proper system was not in place to challenge techniques and adapt to current operational needs.

As the story goes, in 1995, then Lieutenant Colonel Stanley McCrystal, the 2nd Ranger Battalion Commander, ordered the development of a consistent and effective combatives program. Headed by then Staff Sergeant Matt Larsen, the development group researched how to design a combatives program. Larsen and his team traveled the world in search of a combatives program. Various styles throughout the world were analyzed. As the team researched each style, they realized that each country had a specific reason for choosing a certain style (Paragon, 2010). For example, they noted that many countries chose a style for its military based on styles that were dominated by its culture (Paragon, 2009). In the end, Larsen and his team agreed that Brazilian Jiu Jitsu was the ideal fit for the Army.

Brazilian Jiu Jitsu (BJJ) is a ground influenced martial arts that was developed and made popular by the late Brazilian Grandmaster, Helio Gracie. Gracie, a small man in stature, was able to refine techniques that he learned from Judo and Japanese Ju Jitsu as a young boy. Gracie developed a system in BJJ that allowed him to use his small frame against much larger adversaries. BJJ affords a person the ability to fight a person on their feet or on their back. However, it is the ability to fight on the ground, effectively, that makes BJJ unique from all other martial arts. Most important, Matt Larsen recognized BJJ as the most effective martial art for MAC to build its foundation.

The highlight of BJJ's success is with the Ultimate Fighting Championships (UFC). Founded in November of 1993, the UFC is a mixed martial art event that pits two opponents against one another. Advertising hand-to-hand combat, with minimal rules, the UFC wanted to match the different styles of martial arts against one another to see which one was the best. There were no weight categories, no rounds, and fighters were expected to fight until one man was left the champion. Helio Gracie tasked his son, Royce Gracie, with the job of defending the techniques of BJJ against other martial arts

forms. Royce Gracie went on to win the first UFC by defeating all three of his opponents. After this first UFC tournament, BJJ has continued to maintain a dominant style in the world of martial arts.

Matt Larsen believed that Brazilian Jiu Jitsu was beneficial for the Army in many ways. First, BJJ was used in the rough streets of Brazil in no holds barred competitions and actual fights. BJJ was a proven system outside the confines of a training facility. Second, the techniques of BJJ are easy to learn which allows a student to easily grasp the lesson material and move forward. Third, BJJ afforded Army practitioners a competitive base to improve and refine techniques for real combat situations. Finally, BJJ was readily available throughout the U.S. due its popularity because of the UFC.

However, BJJ was far from the perfect martial art. Successful techniques from various self-defense systems are intermingled in MAC depending on the situation. For example, the effective takedown and throws of judo and wrestling are taught. The strikes of Boxing and Muay Thai (a devastating martial art from Thailand that focuses on strikes with knees and elbows) are used for offensive stand up techniques.

As Larsen and his team began to learn the techniques, they began to manipulate them to cater to the self-defense needs of the soldier. Larsen designed a program that was comprehensive and allowed room for flexibility. With an established combatives program developed by Army Rangers, it was not long until the rest of the Army took notice, and the Modern Army Combatives (MAC) program was eventually established (Paragon, 2010).

2. Development: A Rough Road Well Worth the Pain

Matt Larsen faced many issues in development of a combatives program. As Larsen recalls, “limitations of institutional training, the many sources of divergent information and the natural desire for a quick fix that focuses on a particular tactical demand at the expense of developing a system that builds real skill” were issues that he faced (Larsen, 2007). In order to compete with these issues, Larsen had to develop a program that convinced the Army of its value. Larsen designed a program that was detailed in its approach and provided a soldier an opportunity to develop at a reasonable

level. Additionally, the program was designed to be user friendly for all service members. Another aspect that makes MAC unique is its ability to train soldiers to allow them to train others. With this approach, MAC can concentrate on spreading the techniques and principles of combatives to a larger audience.

MAC's headquarters is in Ft Benning, Georgia. However, certified Army combatives instructors are spread throughout the globe where Army battalions and Brigades are located. Additionally, MAC has several mobile training teams to certify instructors and train soldiers in what is required. MAC course qualifications are divided into four levels:

- a. Level I – 40 hours (1 week)
- b. Level II – 80 hours (1 week)
- c. Level III – 160 hours (4 weeks)
- d. Level VI – 160 hours (4 weeks)

In his article with *Infantry Bugler*, titled “Combatives: The School House View,” Matt Larsen relies on several variables that guide the success of MAC:

- a. Skill Development: Larsen believes in two components that are crucial to skill development. One component is accountability of standards set. He believes that each soldier must be set to a standard in combatives and then held accountable. The second component involves the benefits of training these skills with another individual on a consistent basis.

- b. Situational Training: This type of training is based on the lessons learned in combat. Situational training is necessary for combatives students to prepare themselves mentality for what they might expect in combat. An example that Larsen uses is providing a room-clearing situation that is reflective of current operations in Iraq and Afghanistan.

- c. System Principles: To maintain the highest standards of MAC, Larsen and his team falls back on these eight principles to guide their future success:

1. Standards – holding soldiers accountable for their training.
2. Systemic Training – seen as a progression and not a short cut, MAC is designed to build on a foundation of teaching and learning.
3. Continuous Training – graduating the combatives course is not enough, the soldier needs to constantly train his or her skills at their respective units.
4. Competition – hones fighting ability and gives soldiers the arena to test skills learned in a positive environment
5. Drills – used as a tool to refine skills and to assist with physical training
6. Live Training – helps in showing what real combat might be like with a live opponent
7. Situational Training – incorporating combatives scenarios in training exercises give soldiers a feel for what they might experience in combat
8. Combat Feedback – lessons learned is critical for MAC to improve and mature

3. The Benefits Outweigh the Risks

The mention of hand-to-hand combat brings bloody images to the minds of many. The popularity of mixed martial arts (MMA) is growing in the United States. Nonetheless, despite its growth, there is a strong population that advocates against the violence of the sport. Despite MMA's popularity, it has not received acceptance into mainstream media like football, baseball, and basketball. MMA is considered too violent compared to most sports that are viewed on television. However, there is a little evidence that proves MMA is more violent than established sports such as boxing and football. Additionally, on a military level, there is little evidence to prove that MMA offers greater risk of injury than running or weight training.

There is minimal negative feedback from the Army in regards to the dangers of MAC. MAC injuries are no more intense than traditional Army routines (such as running,

marching, pushups, sit-ups). Additionally, MAC is arguably less injury intense than more dangerous training, such as Ranger School, or Airborne School. In regards to injuries, the benefits of the program seem to outweigh the risks. The proof of the Army's praise for the benefits of the MAC program is MAC's continued development and expansion throughout the Army. This is not to say that precautions for injury prevention are not in place. MAC instructors carefully watch and scrutinize every aspect of training. In areas that involve physical contact, every precaution is taken to ensure each soldier is provided a safe, but realistic training environment. MAC has a very stringent Operational Risk Management (ORM) program in order to permit them to perform hand-to-hand combat training in the Army. With these operational restraints in place, the violence of hand-to-hand combat is minimized.

Despite the injury risks, the Army sees the benefits of MAC in its training curriculum. To date, MAC has over 900 testimonials from soldiers crediting their success to combatives training. Here is a list of five things that the MAC School describe as real combat situations to use combatives (cited directly from MAC PowerPoint):

- a. A compliant subject...suddenly becomes *NON-COMPLIANT*.
- b. The Battalion indicates that an Intelligence Subject is so important that he must be *CAPTURED*.
- c. The Number 1 man in a stack team encounters hostile opposition and has weapons *MALFUNCTION*.
- d. When turning a corner in a bunker complex, an enemy grabs one of your soldier's weapons and he is *PINNED TO THE WALL*.
- e. In close quarters, an enemy attacks one of your soldiers under *ZERO ILLUMINATION*.

4. Current and Future Challenges

The current challenge of MAC is staying relevant. In martial arts, the challenge to stay relevant is always present. It is only human nature to improve on what was once learned before. In a battlefield sense, Army combatives must focus on providing

techniques that give its soldiers the best opportunity to win. The basic principle to this is a common phrase heard in the military, “as we evolve, so shall the enemy.”

An example of change to stay relevant is the adjustments MAC made to its program in late 2009. With the focus of the war shifting to Afghanistan from Iraq, there was a need to improve techniques in close quarters combat from the lessons of Iraq. After action reports recalled an increase in enemy contact entering houses and other confined areas. The grappling influenced MAC style quickly adapted to focus more on standup techniques (Little, 2009).

Another challenge is to ensure the training of all Army service members. This is a daunting task for Army combatives due to the large size of the Army community. However, it can be done. Since 2002, there are over 57,000 graduates of the Army Combatives School (Little, 2009). MAC instructors are available on almost every location that houses Army service members. The job is placed on senior leadership to ensure all soldiers are given adequate time in their work schedule to qualify.

One final challenge that MAC faces is ensuring that combatives is consistent with the daily routine of a soldier. Iraq and Afghanistan has worn down our services. Operational tempos of deployments take a toll on service members. As Army leadership makes efforts to allow more time for families, they must not sacrifice the essential tools that make the U.S. Army lethal in combat.

C. UNITED STATES MARINE CORPS

MCMAP is integral to the development and sustainment of our Warrior Ethos and it continues to be updated based on lessons learned to better prepare Marines for the challenges of current and future battlefields. It is a key asset in developing both war fighting skills and character that all commanders should be utilizing to its fullest potential.

— General James T. Conway, Commandant of the Marine Corps (Mar 07 message to USMC)

1. Brief History

The United States Marines arguably boast the strongest reputation for war fighting skills of any force in the world. The U.S. Marines own the distinction of serving

in every armed American conflict in history. From its birth in 1775, up to the most current wars in Iraq and Afghanistan, United States Marines do not shy away from a fight. During this long period of warfare, the Marines molded their riflemen to fight like warriors. Armed with not only their rifle, Marines armed with a fierce spirit and mentality that allowed them to be highly successful in the most harrowing situations. As they trained in combat skills, Marines also trained their mindset to create a balance that is quite unique in combatives. Aggressive, fearless, and taking the initiative, the Marine Corps created an exclusive breed. It is in this description that makes the Marine Corps so culturally unique from other war fighters.

Since the Revolutionary War, the Marines have engaged in unarmed combat. There are moments in history that define the Marines combatives culture. In World War I, deadly trench warfare focused the Marine Corps to provide intensive training with the bayonet. This period of time was credited as the first period that Marines trained in hand-to-hand combat skills.

In post-World War I, arguably one of the most notable books in combatives history was published by W.E. Fairbairn. Fairbairn's book, *Scientific Self-defense*, was based upon in earlier book titled *Defendu*. Fairbairn was an instructor for the Shanghai Police teaching the styles of Chinese Boxing and Japanese Ju Jitsu. Mixing these two styles together, Fairbairn created techniques that taught how to defend from an unarmed attack and restrain a person in close quarters situations. His justification for writing this book was simple. During the post World War I period in China, it was illegal to carry a gun which made the likelihood of unarmed conflict very high. Rex Applegate, a student of Fairbairn, modernized the techniques taught by Fairbairn for the U.S. soldiers in World War II, when he published a book in 1943 titled, *Kill or Get Killed!*

By World War II, combatives skills for the Marines refined and incorporated training aspects to introduce the core values that are the foundation of the Navy and Marine Corps: honor, courage, and commitment (MA 1.16, 2010). By the end of World War II, the Marines accumulated a wealth of combatives experience from their fight in

the Pacific. Like the U.S. Air Force during this period, the Marines were influenced by the Asian martial arts. Several combatives styles developed from these multiple experiences.

If we could argue one turning point in the focus of combatives for the Marines, it was during the Vietnam War. Then Lieutenant James J. Jones was fighting alongside a unit of Republic of Korea (ROK) Marines. During his period with them, he was impressed with the fighting spirit that was instilled within every ROK Marine. The ROK Marines displayed tremendous pride in their national identity. They demonstrated mastery in the martial arts, and personified the warrior spirit. The training and fighting skills that Lt. Jones witnessed was brutal and effective. So effective that when ROK Marines appeared on the battlefield with their unique jungle uniforms, the enemy feared them, and usually ran away. This impression left by the ROK Marines greatly affected the future Commandant of the Marine Corps.

In 1989, the United States Marine Corps adopted the LINE System of combatives. L.I.N.E., which stands for Linear Infighting Neural Override Engagement, was designed for dangerous close combat conditions. It was the Marine Corps attempt to develop a standardized system. By 1999, the new Commandant of the Marine Corps, James J. Jones, directed his staff to develop a program based on the principles he witnessed with the ROK Marines in Vietnam. Gen. Jones wanted a program that focused on developing a strong warrior ethos for his Marines. With this directive, the Marine Corps Martial Arts Program (MCMAP) was born.

2. MCMAP: Not Your Daddy's Combatives Program

On paper, the MCMAP program is like any other martial arts program. Several manuals detail each set of requirements to attain each belt level in MCMAP. Each manual consists of positions and forms to start in, as well as techniques to execute, when faced with a certain situation. However, what MCMAP attempts to do, that arguably no other program attempts to do as extensively, is focus on the warrior spirit. The physical self-defense aspect of MCMAP is only a portion of the success. MCMAP believes that if you study the program and advance through the belt system, the student acquires the

necessary skills to survive in combat. What makes MCMAP unique is the concentrated focus on developing a Marine's overall traits of physical, mental, and character. When the warrior ethos is refined and focused, embedding the martial arts side (the technique side) of MCMAP makes a truly lethal combination of warrior.

The Marine Corps borrowed many traditional martial arts styles for MCMAP. Unlike the Army's choice of Brazilian Jiu Jitsu, the Marine Corps uses techniques from mainly Asian sources such as China, Korea, Japan, and Thailand (Kennedy, 2003). It is hard to point out exactly what styles the Marine Corps uses because the Marines pick techniques from all sorts of self-defense styles. Throwing out techniques that do not benefit in combat, MCMAP picked only the combat proven techniques. Another contrast to the U.S. Army's BJJ influence is the Marine Corps tries to avoid going on the ground. While the Army is grappling focused, the Marines are striking focused. Most Marine Corps techniques involve strikes and takedowns. This is not to say the Marines do not embrace certain elements of grappling. Grappling is only a small part of the big picture of MCMAP. The most important rule for Marines is to stay on their feet.

3. The Three Disciplines: Physical, Mental, Character

It's like a three legged stool; you have to do all three (physical, mental, and character). If you don't and only do two or one of the disciplines you will fall on your face and the system will fail. There is no system equal to it to compare to.

— Lt Colonel (RET) Schusko, Director of MCMAP
(MCMAP Homepage)

As then Captain Yi, USMC, comments, "MCMAP's overarching purpose is to mold and strengthen the USMC collective identity, social structure, and culture" (Yi, 2004).

The Marine Corps, unlike the MAC system, relies on a belt structure from low to high, of tan, grey, green, brown, and black. The black belt ranks denoting an individual who has mastered technique, and exemplifies the warrior ethos and core values of the United States Marine Corps.

Area of focus of MCMAP is divided into three sections of physical, mental, and character. In Figure 1, we see the progression and the building blocks to becoming a complete Marine.

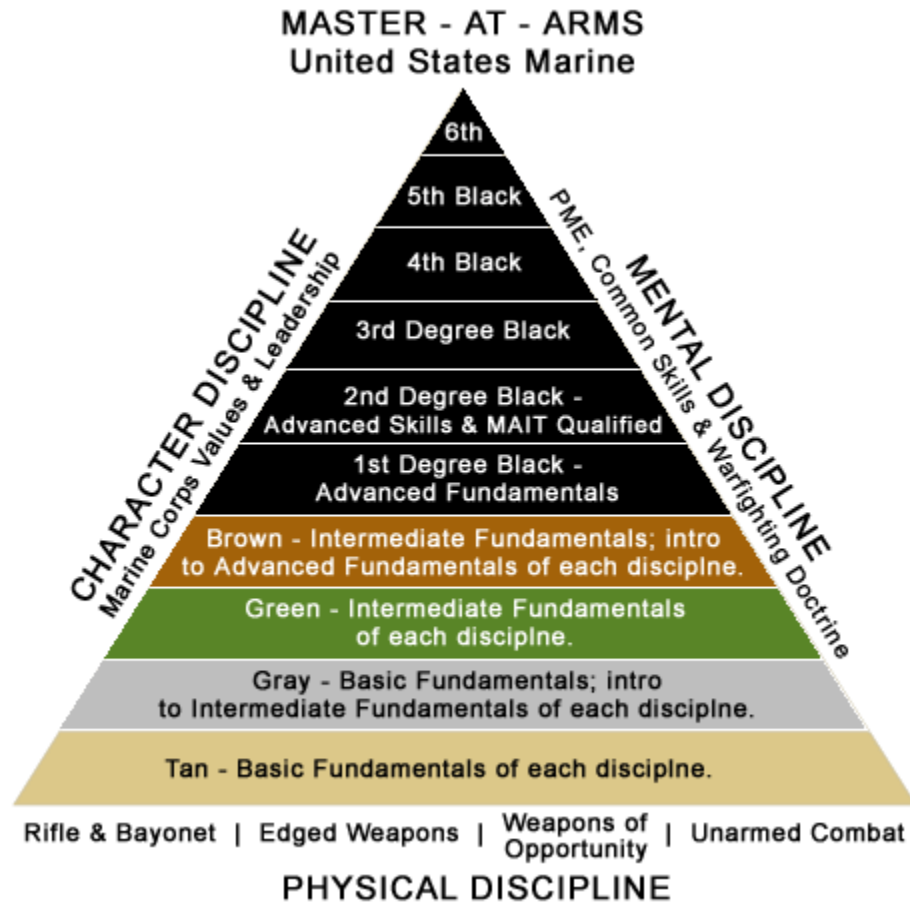


Figure 1. Physical, Mental, Character Synergy (From Yi, 2004)

The physical portion of the synergy includes the elements of combative arts and combative training (Yi, 2004). Combative arts consist of unarmed training techniques as well as the foundation of Marine Corps fighting that include bayonet and rifle tactics. Combative training incorporates physical fitness with the techniques of combative arts through water and land training.

The mental portion of the synergy educates Marines by what Captain Yi describes by, “studying the art of war” (2004). Marines go through a serious of knowledge

building courses that test their mental capacity and challenge them to think quickly and correctly. History, combat tactics, decision making and planning, are a few courses that Marines must study.

The last synergy, character, is a study in ethics, self-discipline, and mentorship. The key word to this section of training is restraint. MCMAP is trying to teach Marines that there are levels of combat in war. MCMAP argues that Marines are held to a higher standard, and need to make the right ethical decision in combat situations. Key tasks for this synergy are mentoring programs, understanding traditions and customs, and studies in ethics.

Through the mental, physical, and character disciplines, a Marine warrior is created, as shown in Figure 2.

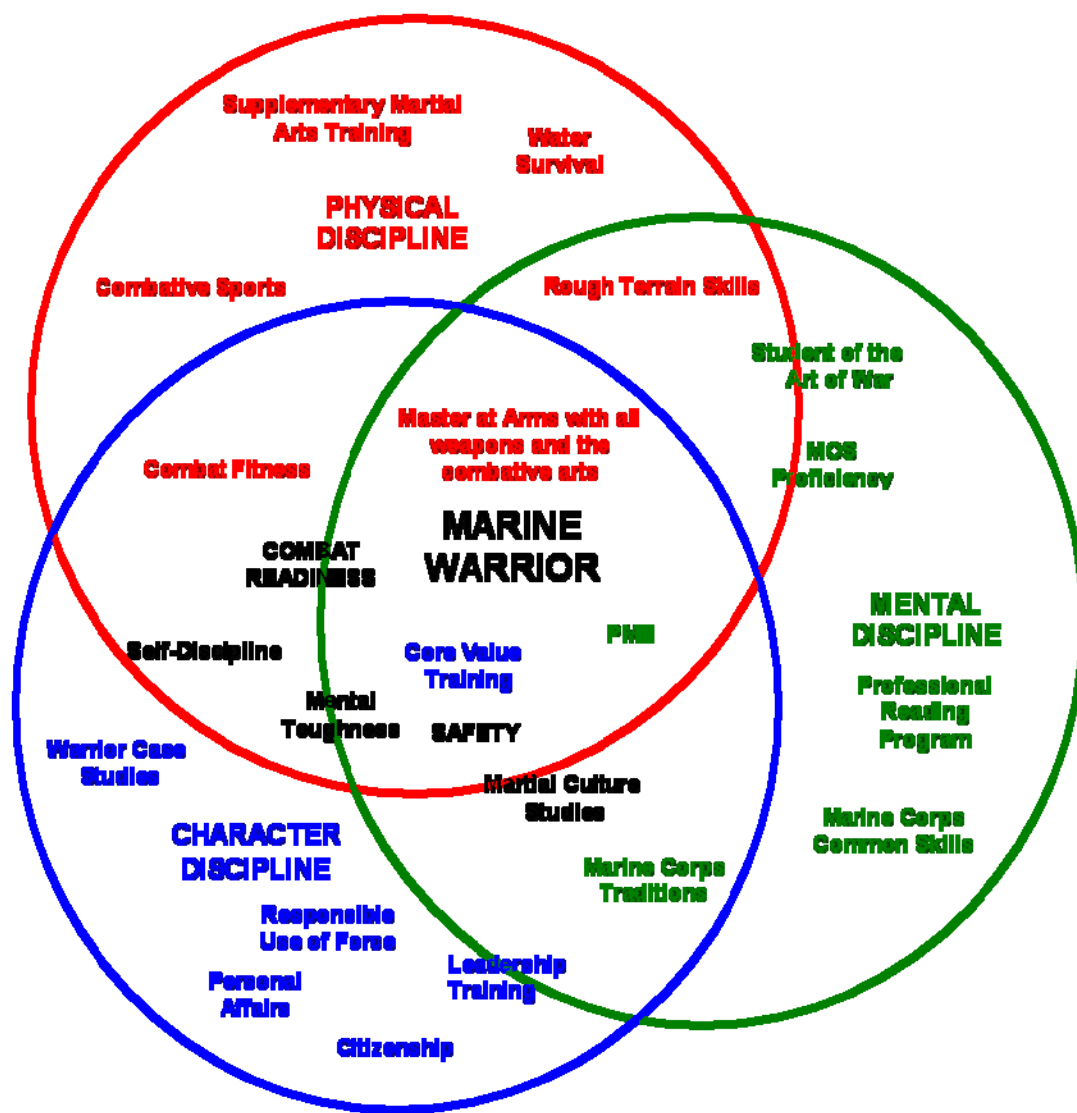


Figure 2. Marine Warrior Ethos (From Yi, 2004)

4. The Present and Future of MCMAP

Currently, over 98 percent of the United States Marine Corps is trained to tan belt (Lamothe, 2009). The United States Marine Corps trained over 11,000 instructors since MCMAP was founded. MCMAP has 1,500 black belt instructors currently, as well as over 10,000 green belt instructors. There is arguably a MCMAP instructor available at every Marine Corps location in the world. Currently, the MCMAP School can credit at least 25 actual combat experiences in Iraq and Afghanistan where MCMAP saved lives. Additionally, MCMAP has already trained thousands of Navy personnel. Mostly Navy corpsman, with future assignments to Marine units, these Sailors are required to certify at the tan belt level of MCMAP prior to graduating Navy Corps School. Also, MCMAP records three certified Black Belts in the Navy.

The way ahead for MCMAP is to address key areas of concern to develop its program for the future. MCMAP sees a need to train more instructors. As standards are set, there is a general need in the Marine Corps to rise above these standards. Since young Marines are relegated by their rank to remain at lower belt levels, it is difficult for motivated Marines to advance further. However, as counter argument, superior technique is only one facet of the Marine Corps three synergies. Experience and a firm knowledge of the core values is a huge factor in promotion to senior belts.

MCMAP is making efforts to provide more facilities of training for students. The Marine Corps Martial Arts Center of Excellence (MACE) has a special training mat that consists of recycled surgical gloves grounded up into mulch type material. This mulch type material allows MACE to boast an extremely low injury rate. As Director of MACE, Joseph Schusko comments, “When you’re falling on rubber, you’re less prone to get injured than if you go out on hard flats like we used to out here” (Lamothe, 2009). MCMAP is working on designing more facilities, to reach out to more Marines, to provide them the best possible tools to train. In this regard, it is a way for MCMAP to address concerns that some senior leadership raise with MCMAP injuries. Similar to MAC, some MCMAP students are not void of injuries. However, MCMAP’s injury rates are still no more than traditional forms of physical training. Similar to MAC, MCMAP recognizes the benefits of the training far outweigh the cost of injuries. As former

Captain Brian Stamm comments, “I think people need to be understanding, and commanders can’t just abandon the program because they get a few injuries from it because it’s just too invaluable to your guys mentally.” (Lamothe, Feb 2009).

D. UNITED STATES AIR FORCE

The combatives course is an excellent part of training. Based on the Army’s modern combatives course and intended for close quarters combat, it was definitely something new to me. Even if I never actually have to use this down range, the course provides a great basic skill set and builds confidence necessary for self-defense. As a female, the training is even more invaluable.

— Captain Jessica Woods (U.S. AIR FORCE
LIVE, May 10, 2009)

1. Brief History

When Air Force Lieutenant General Curtis LeMay headed the Strategic Air Command (SAC) in 1949, he took the recommendation of his aviators, and directed the establishment of formal combatives training for his Air Force pilots and crews (Svinth, Nov 2000). In World War II, American bomber crews faced devastating losses in Europe. Many bombers were shot down, with crews killed, captured, or evading capture. This dramatic period in Air Force history taught the seasoned bomber teams that training in self-defense tactics was a key element to future flight crew training.

Initially, instructors were difficult to find for the Air Force. During the 1950s, martial arts schools in America were very limited. The number of servicemen who received training in martial arts was limited. Also, there was no television venue like the UFC to highlight which martial arts was the best. However, experiences in World War II with Japanese fighters advertised the effectiveness of their martial arts abilities. The end result was that several Air Force members received orders to Japan to train intensely in various martial arts. The style that was developed for the crews was a combination of Judo, Aikido, and Karate.

Judo is a style deeply rooted in the art of throwing and restraining an attacker once on the ground. Although the martial art has a long, ancient history of self-defense

and combat, Judo evolved in the 20th century as more of a competition sport. However, several takedown and submission techniques established in Judo laid the foundation for BJJ.

Karate, another ancient art, relies strictly on the stand up techniques of punching and kicking, using arms and legs to block and counterattack an opponent. Karate is rooted in a deep foundation of stances and systematic moves called *kata*. Through drills, kata moves are refined until they are embedded in instinctive reaction.

Aikido is a relatively new martial art that was established in the 20th century with deep ancient root. Like BJJ, Aikido is a refinement of Japanese Ju Jitsu and was created as a non-lethal way to subdue an attacker. Using an opponent's enemy against it, the strength of aikido was its ability to provide techniques to defend against multiple attackers. Aikido is very popular in the law-enforcement communities throughout the world. The wristlocks and subduing techniques that Aikido offers provides law-enforcement officials a non-lethal way to deal with criminals.

A 320-hour program was established for Air Force crews for the initial program (Svinth, Nov 2000). This was the starting point in the Air Force's history of combatives training. The purpose of combatives at that time was twofold: develop unarmed combat skills and improve physical fitness (Durnil, 2010). The program included several values that airmen improved with in training to include (Svinth, Nov 2000):

- a. Physical Coordination
- b. Balance
- c. Relaxation
- d. Combative Skill
- e. General Physical conditioning
- f. Mental and Physical Alertness
- g. Confidence
- h. Courage

- i. Aggressiveness
- j. Self control
- k. Restraining techniques
- l. Physical Coordination

In 1959, a 159 hour combatives course was developed (Svinth, Nov 2000). As Air Force combatives progressed, many airmen became very proficient in the Japanese martial arts. In 1962, Air Force records account for 160 black belt level instructors and over 20,000 crewmembers qualified in the course (Svinth, Nov 2000). In 1964, the Air Force even credited their training to sending four members to the summer Olympic Games.

Unfortunately, combatives training to the Air Force flight crew curriculum did not last. During the end of the 1960s, combatives training was removed from training. The reason for removal was also twofold: to speed up training and to cut costs (Svinth, Nov 2000). The elimination of martial arts in the training program was so swift and complete that, “Over forty years later...there is virtually no institutional memory of the program within the active Air Force or its historical branch” (Svinth, Nov 2000).

Despite the loss of combatives for aircrew training, the Air Force Academy maintained a presence in hand-to-hand combat with the sport of boxing. The intended result for this program was twofold: improve competition and develop courage in a stressful environment (Durnil, 2010). This type of training at the Air Force Academy once again proved successful in a sports themed manner: 18 Team National Champions (104 Individual), and 287 All-Americans (Durnil, 2010). The result for both bomber crews and boxers was similar: Physical fitness was improved, hand-to-hand combat capability was increased, and an Airmen’s character in a harsh environment was tested and developed.

2. Birth of AFCP

After an absence of over forty years, in October 2007, the Chief of Staff of the United States Air Force ordered the development of a standardized Air Force combatives

program. The Air Force's reasoning was simple, due to the current operations in Iraq and Afghanistan; more Airmen are in harm's way. U.S. Air Force senior leadership recognized the push for increased joint operations and its duty to provide capable warriors to the fight. The Chief of Staff ordered the creation of a combatives program with a "Warrior Ethos" theme (Durnil, 2010). Lieutenant Colonel Adelson, Deputy Chief of the Air Education and Training Command comments, "We have always produced the smartest airmen ... ready to go out and do the mission ... but now we are producing warriors. The Air Force combatives is just another facet of that warrior production." (Army Times, Jan 29, 2008).

Once the Chief of Staff issued the directive, a task force was created to decide on what program to create. After several trials of available programs, the Air Force decided on the Army's combatives model. The Air Force chose the Army mold, as Matt Larsen recalls, "because of our past successes" (Army Times, Jan 29, 2008). Additionally, the Air Force had culture compatibility with the Army due to multiple joint operations between the two services. With the help of MAC founder, Matt Larsen, the Air Force pushed forward in the development of its own program.

By November of 2008, a program was approved and in development (Durnil, 2010). In September of 2009, the United States Air Force Combatives Program (AFCP) was born. During the same time, the Air Force Combatives Center of Excellence was founded, under the supervision of the Air Force Education and Training Command (AETC).

Here is a list of desired "learning outcomes" directly from the Air Force Combatives Center of Excellence:

1. Establish Common Warrior Ethos throughout Air Force
2. Acquire Basic Unarmed Offensive and Defensive Skills
3. Expose Airmen to Full-Resistance Submission Grappling Skills
4. Cultivate Courage and Instill Confidence
5. Develop Ability to Think and React under Pressure

6. Develop and Practice Aggressive Mindset and Mental Toughness needed to Survive

Currently, all future Air Force officers are required to train in AFCP. These officers in training are required to complete a ten hour combatives module. The Air Force Academy boasts an estimated 1,000 cadets trained in the course (Durnil, 2010). At Maxwell Air Force Base, over 4,000 students of OTS, ROTC, and ASBC are trained each year (Durnil, 2010).

Although injury risks are not yet published, one interesting statistic surfaced throughout the many decades of Air Force Academy boxing training. The Air Force Combatives Center of Excellence notes that not one cadet lost a commission or training hours from injury (Durnil, 2010). As of this thesis, combatives in the Air Force received favorable feedback from students. Additionally, the level of injuries is minimal.

What makes the development of AFCP unique, and provides a strong argument for a Navy copy, is the lack of actual hand-to-hand combat experiences. As the brief history of combatives in the Air Force told us, the need for a combatives program was reactionary. Stemming from severe experiences behind enemy lines, self-defense was added to the training curriculum. For AFCP, its creation is quite proactive. The Air Force realized that there is a possibility of unarmed action, and a genuine hunger to develop a warrior mentality within the airmen community.

3. The Way Ahead

The next phase in the development of AFCP is to implement a training program for the enlisted airmen. However, several issues need to be addressed before implementation. Logistical issues, need for instructors, certification criteria, and safety issues in the area Operational Risk Management (ORM) need to be addressed (Durnil, 2010).

As the Air Force Combatives Center of Excellence comments, some future plans for AFCP are to:

1. To train ALL Air Force personnel in AFCP.
2. Establish a combative school house (as a main hub of combatives training similar to Ft Benning's location for MAC)
3. Specific AFCP modules will be created for each airman's Military Occupation Specialty (MOS).

E. CONCLUSION

The United States Army developed a combatives program out of a need to standardize its hand-to-hand combat training. Through its development, the MAC program provided soldiers with tools to assist them in self-defense. The United States Marine Corps developed a program that not only provides Marines with self-defense skills, but more importantly to them, provides Marines with character building skills. The United States Air Force developed a program that models after MAC. Despite the Air Force's minimal operational need for hand-to-hand combat skills, the benefit of building confidence and character in every Airman was a major contributor in program development.

The largest issue of a combatives program is injury. This issue is mitigated through quality control features such as direct instructor supervision, safety equipment, and strictly enforced rules and regulations that limit damage. All three programs argue that the benefits of combatives outweigh the costs. The improvements in character, confidence and capabilities are seen in all three programs. In the next chapter, we discuss military combatives from an international perspective.

III. INTERNATIONAL COMBATIVES

A. INTRODUCTION

On an international level, two countries, Russia and Israel, possess outstanding examples of combatives programs for its military forces. The country examples in this chapter argue the reason for developing a combatives program internationally is very similar to the reason U.S. military services developed its programs.

Similar to the benefits of U.S. combatives programs, international combatives promote a strong warrior ethos, as well as a technically proficient soldier. For some countries, the development of combatives was born out of necessity and survival, with a secondary function of character development. For other countries, martial arts is looked more as a way of life (character building) with the added benefit of providing an advanced skill set for a soldier. However, despite two paths in the reason for development of a combatives system, both paths are arguably important, complement one another, and justify each example's future combatives development.

B. RUSSIA

1. History

Russia has a long, storied history in martial arts. Considered a tribal skill, it was passed on from generation to generation up until the 6th century (Shillingford, 2000). At this point, the tribal warriors had to rely on these skills to defend against attackers invading the countryside. With every attack, the martial skills of the tribes improved, and their skills reached a climax with the Mongol invasion and occupation starting in the 13th century (Shillingford, 2000). However, after the Mongol invasion, up until the revolution of 1917, there was a sharp decline in martial arts skills (Shillingford, 2000). The significant reason for the decline was the invention of weapons that limited the focus of unarmed combat (Shillingford, 2000).

In 1918, with Lenin in control of the now named country of the Soviet Union, he ordered his staff to develop a combatives system (Shillingford, 2000). The reason for his

directive was to combine the various martial arts styles that evolved in the different tribes into one national model (Shillingford, 2000). By combining all the styles that existed in Russian history into one model, Lenin also eliminated the national culture that was developed throughout the centuries for the sake his communist regime. The research team traveled to various parts of the world researching martial art styles. Similar to how the United States military combatives systems developed generations later, the Soviet Union created a martial arts style that comprised of the very best techniques of each martial art system. Lacking an official name, this martial art system was simply called *Systema* amongst its practitioners.

Using *Systema*, and with further modifications, an established Soviet martial art was developed, called SAMBO. SAMBO is a Russian acronym that stands for Samozashchitya Bez Oruzhiya. SAMBO's Russian translation "is a martial art without weapons" (Shillingford, 2000). From the early roots of the Russian tribes, SAMBO is the recognized martial arts for the nation of Russia as we know today. SAMBO was designed as a martial art that was simplistic, and was designed to be taught to the lowest level of the Russian population.

Developed in the 1920s, SAMBO's strength is in its grappling skills. Due to centuries of repelling attack from foreign invaders, the Russian tribes were heavily influenced by the different unarmed styles they witnessed. In particular, the Mongolians brought an ancient style of wrestling to Russia. Wrestling is a basic foundation to the style of SAMBO. Also, similar to Brazilian Jiu Jitsu, concepts of Judo and Japanese Ju Jitsu were added as well. Giving credit to past history and the research done by Lenin's development team, dozens of other varieties of martial arts was also added to strengthen the striking side of SAMBO. Due to Lenin's focus of maintaining a unified national identity, all other styles of martial arts were banned from the Soviet Union. Only SAMBO was taught. Pressure from the government forced the principles of SAMBO to as many Soviet citizens as possible. From these roots, SAMBO was taught to civilians through mediums such as the public school system. In government, SAMBO was taught to police, military and government officials.

2. SAMBO: The Reasons for Its Use

SAMBO has two recognized forms: combat and sport. Sport SAMBO, which is executed in tournaments and competitions, is the non-lethal form of combat SAMBO. Sport SAMBO removes striking techniques and focuses on the grappling aspect. A win is achieved by the most total points at the end of a match, or by submission, which is defined by an opponent conceding defeat, or losing consciousness due to a choke technique.

Combat SAMBO is taught for survival. Lethal blows and devastating joint locks are added to neutralize an aggressor. Russian military forces use protective gear to minimize injury during training. The military and security forces focus extensively on Combat SAMBO for training.

As we focus on the military side of SAMBO and combatives, the reason for the existence of a program is for self-defense. As we stated previously, the history of Russia is one of constant war. Prior to the advent of effective weaponry, unarmed combat reigned supreme throughout the Russian countryside. During the 21st century, warfare contributed to the deaths of many millions of Russians. In World War II, Hitler's German Army fought entire cities in the Soviet Union. Military and civilians assisted in repelling Hitler's army. It was a national urgency for all citizens to be able to defend themselves.

The Russian military is trained in some level of SAMBO, to include its Navy. When we argue why combatives is needed in the U.S. Navy, we can look to the Russian philosophy as further example of proving our point. SAMBO is taught to the military out of possibility. Even from the early Russian tribes, self-defense was taught not for the reason of *why*, but for the reason of *when*. The Russians believe in being prepared for the worst, and in their mindset, the inevitable. Simply put, "you never know when you might need it."

SAMBO's benefits to the Russian military are it provides a tool for self-defense as well as promote a national identity. Although the intention was to provide the necessary tools for self-defense, SAMBO evolved into a mental strengthening tool as

well. Through training, conditioning and competition, SAMBO is credited for instilling a warrior mindset, one of confidence and courage in a stressful environment.

C. ISRAEL

1. History

During World War II, the British Army entered the region of Palestine and recruited the assistance of Jewish fighters against the Germans (Wagner and Nardia, 2010). Within this group of fighters, on May 14, 1941, the British established the Pal'mach, a Jewish Special Forces team (Wagner and Nardia, 2010).

The Pal'mach was trained in every aspect of combat: small arms, to hand-to-hand combat, physical conditioning and small unit tactics to name a few. This training was called Kapap (Wagner and Nardia, 2010). Not related to one particular evolution of training, Kapap was used as a broad term to summarize what the Pal'mach worked on. However, this term was generally referred to when discussing the hand-to-hand combatives training of Israel.

Once Israel became a nation state in 1948, combatives in the country was constantly refined and tested in real world situations. Through terrorist attacks and nation state takeover attempts, the Israeli combatives system was polished through bloody engagements.

2. Kapap

Kapap was the first CQB training introduced in Israel and was based on stick fighting, knives, guns, and hand-to-hand and even stone throwing in the old days. The idea is to fight with what you have available in your hand.

— Avi Nardia, 2010 (Avi Nardia, Kapap
Combatives)

Similar to MCMAP and MAC, Kapap does not focus on the traditional aspects of Martial Arts. There is no bowing or uniforms. The focus is on neutralizing your aggressor and making sure that you come home alive. When the British began training the Pal'mach, hand-to-hand combat training was a mixed bag of techniques to include boxing

and wrestling. Knife fighting and handgun disarmament techniques were emphasized. Kapap, as the hand-to-hand combat was now referred as, took the most effective techniques and refined them. In 1949, the Pal'mach was removed from service and replaced in 1953 by another commando team, Unit 101 (Wagner and Nardia, 2010). The Kapap combatives system survived though, and for the next several decades remained a staple in Israeli commando training. However, due to the fact Israel was in constant conflict, the need arose that all military service members should train in combatives (Wagner and Nardia, 2010).

3. Krav Maga

The original concept of Krav Maga was to absorb any martial art that was useful by taking the most efficient techniques that would work in a combat environment, yet with minimal instruction time. Even today recruits receive only a few hours of mandatory training.

— Wagner, J and Nardia, A., 2010 (Inside the Martial Arts)

During the decade of the 1980s, Krav Maga became the established combatives of the entire Israeli military (Wagner and Nardia, 2010). It was a simplified version of Kapap, and was taught at the basic training level to all recruits. Training only consisted of a few hours of instruction but provided recruits with a minimal impression of unarmed combat (Wagner and Nardia, 2010).

Despite the creation of Krav Maga, Israeli commandos still regard their combatives system as Kapap (Wagner and Nardia, 2010). Kapap was designed for the most hazardous conditions of a commando, while the average Israeli citizen could use Krav Maga. Many in the Israeli commando community feel that Krav Maga is “too basic and is reserved for beginners,” (Wagner and Nardia, 2010).

4. Israeli Combatives

The benefits to Israeli combatives are instilling mental strength, confidence, and aggressiveness to an Israeli service member. However, the primary reason combatives was established is survival. The Israeli military routinely faces a difficult time in regards

to the self-defense of its borders. Despite its young history as a nation, Israel is very experienced in the art of warfare. Whether the mission is to fight off terrorist attack or nations, Israel forces itself in a constant state of vigilance.

Alongside Brazilian Jiu Jitsu, Krav Maga is on the rise in popularity in the United States. Advertised as a lethal, effective, and efficient system, Krav Maga is a popular martial art for physical conditioning as well as personal self-defense for the working class population in the United States.

Whether it is Krav Maga or Kapap, combatives is a part of the national culture of Israel. Every citizen of Israel serves an obligated tour of duty in the military, and is exposed to combatives. Similar to Russia's reason for a combatives system, Kapap and Krav Maga's roots were out Israel's national urgency that every citizen must be able to defend the land from aggressors.

D. FINAL THOUGHTS

One point of interest in regards to the two foreign systems is the type of martial arts system that is selected. In most cases, the system that is developed for military use is a recognized martial art of that particular country. Russia and Israel developed martial arts styles that were largely influenced from outside its borders. Traditional martial arts techniques were taken, modified, and refined into respective arts such as Kapap and SAMBO. However, some countries use established martial arts systems with roots that trace back to Confucius and Sun Tsu. Generation after generation studied a particular martial art. This martial art became embedded into the national identity, to include its military. One country that we did not cover but can use briefly as an example is the Republic of Korea, with Tae Kwon Do. Practiced at an early age by a majority of Koreans, Tae Kwon Do is a part of the national culture. It is available in almost every town, and taught in the school systems. The country's military incorporated Tae Kwon Do because almost every citizen was familiar with it in some respect. In this sense, we can argue that developing a different system, or introducing another style might prove difficult.

In early combatives history for the United States, the selection of a martial arts style had little to do with national culture. Martial arts were not prevalent in many cities like it is today. Even now, you would be hard pressed to find a martial art offered in a public school. The early founders of combatives systems relied on their experiences abroad, during peacetime and wartime endeavors. Traditional martial arts systems such as Judo and Karate were selected as self-defense style. However, even during the early period of combatives development in the United States, there was a strong desire by developers to incorporate several styles for the reason of effectiveness. For these reasons, the promotion of martial arts in the United States is a slow, difficult process. The United States does not own deep roots in any martial arts system. In this regard we can see a lack of synergy with other institutions in society such as schools, sports, and clubs. Martial arts are not accepted on a national level in the United States compared to countries like Russia and Israel.

As we look at martial arts today for the United States, we can argue that MMA is slowly starting to embed itself in our national culture. We can see that with the countless MMA gyms that opened up around the country, as well as the media popularity it receives with its events. From the military point of view, the martial arts programs are a cornucopia of different styles from all over the world. From a national point of view, mixed martial arts are an example of the diversity in the United States. We can classify this diversity as a melting pot that reflects the United States. The strength of this melting pot of martial arts is its flexibility. The varied martial arts systems give the United States the ability to pick and choose which techniques are appropriate. More important, adapting and changing styles prove difficult for the deep institutional martial arts roots of other countries.

E. CONCLUSION

Similar to the United States, Russia and Israel developed combatives due to a need to teach survival skills and to develop a better overall warrior. Russia standardized its combatives program to ensure a communist identity, while crushing its previous ancestral cultures. Additionally, a program was created to ensure that every Russian

citizen was capable of fighting the enemy. Israel developed a program to create more efficient fighters in battle. Through this development, combatives developed the necessary fighting spirit and mindset necessary for a country in constant military conflict.

IV. RAISE YOUR HAND IF YOU KNOW COMBATIVES!

A. INTRODUCTION

There is one unique quality of the United States Navy that sets them apart from the rest of the military services, and that is the sea. In order to fight at sea, the Navy developed lethal weapons to maintain sea superiority. From the old sailing ships, to battleships, to the aircraft carrier and submarine, the Navy relies on many platforms to maintain the peace. These weapons of war are the foundation of naval power. The Sailor is the driver that steers these vessels to its destinations. The Navy has the ability to strike at enemies while maintaining its position at sea. Having the ability to attack foes from a distance keeps the Navy away from close combat. For this reason, the Navy Sailor is not considered a frontline element like the Marine, or Army soldier. With the events of 9/11, the very culture of naval warfare changed. In many cases, the weapons of combat are no longer the hulking grey ships and planes. They are replaced only by the Sailor, with a rifle and his or her training.

B. BRIEF HISTORY

During World War II...several top naval officers realized that efficient and effective close quarters fighting skills were needed by all Naval personnel, not just high speed, low drag units like the Scouts and Raiders or the fledgling UDT units. Surface Sailors, submariners, rear echelon supply types, and perhaps most of all, aviators who risked being shot down over enemy territory were just as needy and deserving of quality close quarters training.

— Dan Trembula, MIDN, USNA, 2003, (discussing
the establishment of the V-Five Program in *In*
Quartata Magazine)

The United States Navy tradition spans over two centuries of combat. Similar to the United States Marine Corps and Army, the United States Navy shares the load of many wars, and conflicts through history. The United States Navy's history of hand-to-hand combat begins during the Revolutionary War. Sailors fought side by side with Continental Marines, led by famous Naval Captains such as John Paul Jones. We can

argue during this period of history, to include the War of 1812, that the Navy would reach its peak in close quarters combat. As the world transitioned from the age of sail to the power of steam, so did naval warfare. Fighting between ships was largely kept at a distance. Stronger hulls and more powerful cannons afforded crews the luxury of attrition and a simple plan: firing volleys until the other ship sunk or retreated. By World War II, with the further advancement of ships and naval gunfire, distances and firepower increased. The Battle of Coral Sea in 1942 became the first sea battle where two opposing fleets were out of sight, using only aircraft. By this time, aircraft power dominated the Navy scene as an essential element to naval warfare.

Also in 1942, the use of aircraft played a role in the development of one of the only known unarmed combat systems in the Navy. With aviators needed in both Pacific and Atlantic theaters in World War II, there was a strong chance of being shot down inside enemy territory. Pilots and aircrews needed to prepare themselves to survive behind enemy lines. Seeing a need to train aviators with unarmed combat, Lieutenant Junior Grade Wesley E. Brown, a former collegiate wrestler and police officer, was tasked with program development.

Lieutenant Junior Grade Brown helped develop the “V-Five” Program. The material was developed as a technical manual, as well as a set of instructional videos for aviation candidates.

V-Five advertised itself as a “no-holds barred” style of fighting that involved chokes, eye gouges, bone breaks, and other techniques that were seen as realistic to combat. Brown and his team believed that this style was ruthless because it was necessary. He stated, “Today, as we face enemies who recognize no fair play, the technique of man-to-man competition must be drastically revised to fit the tactics of war. Suspended for the duration is the code of sportsmanship. Now there is only one rule, to win.” (Brown, 1942). Brown’s philosophy is eerily familiar to the code of warfare that many U.S. military combatants face today.

During World War II, the V-Five Program trained aviation students extensively in unarmed combat. Using wrestling as a base for grappling and takedowns, V-Five relied

on strong elements of boxing for strikes, and Japanese Ju-Jitsu for joint locks and breaks. Training was intense. Brown and his team believed in training in an environment that would simulate real time combat (Trembula, 2003). Aviators were drilled repeatedly until moves became second nature.

Dan Trembula commented, “Through sports, the men were indoctrinated with the group loyalty and psychological mindset required in combat...” (Trembula, 2003). Wesley Brown acknowledges that he trained over 10,000 aviators during World War II (Brown, 1951). The V-Five Program had two effects: one, it helped develop and prepare aircrews in hand-to-hand combat and two, it improved team integrity and morale through the intense training.

Unfortunately, V-Five Program died following World War II. During the transition to peace, there simply was not a need for it. Like many programs that started in World War II, they were removed as reactively as they were installed.

World War II began the trend for aircrews to require additional training from normal fleet Sailors. The opposition of being shot and captured was a reality in combat. The Korean and Vietnam Wars would witness countless airmen downed behind enemy lines. However, despite the number of pilots in harm’s way, the last program that was officially recognized was the V-Five program. Additionally, in World War II, the world would witness the last of the naval battles between ships. Technology afforded the Navy to remain at a distance from unarmed combat. The Navy saw a growing shift in fighting culture at the end of World War II. From a long tradition that was prepared and expectant of close combat, the Navy transformed into a service that removed close combat from its mindset.

The Navy was in the safe confines of the sea during the major wars of Korea and Vietnam, unchallenged. Even in Desert Storm in 1990, Navy ships fired missiles and rounds unmolested. The idea of close combat, survival and evasion, was reserved for a select few units such as aviators, corpsman, Sea Air Land (SEAL) teams, and Explosive Ordnance Disposal (EOD) operators.

C. IRAQ AND AFGHANISTAN: A UNIQUE TIME FOR THE NAVY

In this section, we discuss the current combat operational tempo of the United States military. It is important in this thesis to discuss the high stress placed on human resources and how it relates to combatives. We discussed in detail the importance of combatives training from a character building side. This section discusses the importance of combatives training on a tactical and operational level.

When the Iraq and Afghanistan Wars began, the U.S. military dedicated its services in the typical manner it had done for decades. Army and Marine units moved in to take key positions on land. The Air Force provided air transport and fire support. The Navy provided support in the manner of their naval battle groups in close proximity at sea. Any combat related units on the ground consisted of a small number of corpsman, SEAL and EOD teams.

Both wars were expected to end quickly. However, fast forward to 2010, that assumption is incorrect. The war fighting is intense, and arguably some of the most vicious in history. The enemy is not a large army mass similar to World War II and Korea. The enemy is using guerilla warfare tactics. Fighting indirectly, and striking the U.S. and its allies in a war of duration, and not attrition. Seen as an irregular, unconventional war, the wars in Iraq and Afghanistan give us an outlook of the future wars to come.

At the start of the wars, the United State Army was expected to carry the bulk of the ground fighting duties. As the U.S. realized the wars were to last longer than expected, troop deployments were increased. Six-month deployments became 12-month deployments, and then became 15-month deployments. Marine Corps troop levels increased as well. Servicemen in the Army and the Marine Corps were asked to return multiple times, with very little time to compensate for back home. As the years went by, the United States Army still had the lead with the war fighting effort, but they needed help.

Joint operations increased during these wars. Prior to 9/11, joint operations were largely seen as ceremonial. Services conducted joint exercises and operations in a much

smaller scale. The Iraq and Afghanistan Wars forced the services to work together to create a more cohesive fighting force. With the Army and Marine Corps overburdened, tasking was implemented to assign Air Force and Navy personnel to take the load in forward positions on the ground. United States Air Force and Navy personnel were assigned to positions such as security (police) teams and support. As the need for more and more airmen and Sailors grew, the duties placed on them did as well. Additionally, for the first time in history, the United States was witnessing the largest concentration of Air Force and Navy personnel on the combat field.

When you compare the first guidance message from the Chief of Naval Operations (CNO) post 9/11, to the most recent guidance of 2010, the influence joint operations now has on the Navy is quite clear. In the 2002 message, the CNO is quoted as saying, “Presence...power...precision” as he explains the Navy response to 9/11 (CNO, 2002). The Navy relied on its force projection at sea with limited special units on the ground in Afghanistan as was expected at the time. The notable difference for 2010’s CNO guidance is that the CNO describes the Navy using the term “forward presence” as a description to describe the increased ground fighting efforts of the Navy (Roughead, 2010). With these two documents, we can argue that the Navy is starting to understand that many more of its Sailors are going to participate in close combat.

A study conducted in December of 2009, reported that almost 400,000 Sailors deployed to Iraq and Afghanistan (Tan, Dec 2009). The numbers of actual deployments increase to almost 600,000 when you consider many Sailors were ordered to deploy multiple times (Tan, Dec 2009). This is in comparison to the Army’s totals, which is almost triple in number with one million total troops, and over 1.5 million total deployments (Tan, Dec 2009). The Navy totals are low compared to Army numbers, but high when you consider the Marine Corps deployed over 250,000 troops combining for a total of almost 400,000 deployments (Tan, Dec 2009).

From a ground fighting aspect in Iraq and Afghanistan, the United States Navy is involved. We can argue that tactically and operationally, training Sailors in combatives provides the U.S. military with the most capable fighter for combat.

D. WARFARE DESIGNATIONS, AND THE REASON TO TRAIN THEM IN COMBATIVES

The Navy is arguably the most multi-faceted service in the military. With ships, to subs, to amphibious operators, to SEAL and EOD teams, pilots and aircrews, and security personnel, the Navy has various warfare designations. In the following sections, we detail certain warfare designations in the Navy, as well as specific jobs that need combatives. It is important to discuss these jobs in the Navy to provide a clearer picture that self-defense training is necessary.

1. SEAL Teams

The United States Navy SEALs have a long and storied military tradition. From their inception in 1962, the SEALs have been in the front line of combat for the Navy. Starting in Vietnam, the SEALs earned a reputation for their stealth by their ability to snatch and grab victims and disappear into the jungle and swamps. In Iraq and Afghanistan, the SEALs still rely on their stealth and elements of surprise to fight the enemy. With this said, the SEALs are the trademark example of Sailors that have the high potential to be up close with the enemy.

As of this thesis, the Navy SEALs do not have a standardized program in place for their teams. Their individual combatives programs are inconsistent. Each SEAL Team's combatives is contracted out. The style of combatives is dependent on the instructor that is contracted and the style that particular instructor is a master of. Through each decade, the SEALs relied on combatives from various sources. During some periods, the SEALs relied on simply no combatives training at all. Also, because of the high operational tempo, combatives training is dependent on command, team, and operator schedule. There is no standard for combatives like MAC or MCMAP that the SEALs follow. The need for them to have standardized combatives training is quite clear. It is also disturbing to note that an elite Special Warfare operator lacks the combatives training that a basic rifleman or soldier receives on a daily basis.

2. EOD Teams

Navy Explosive Ordnance Teams are routinely asked to enter various parts of the world that is considered dangerous. Tasked with various global assignments, Iraq and Afghanistan are two countries that Navy EOD deploys. Navy EOD teams are assigned to operate with SEAL and Special Forces teams in potential close-quarters situations. Additionally, they are assigned to work on their own, or with other international partners. EOD operators have an inherently dangerous job working to defuse bombs. However, it is the nature of getting to the bomb that makes EOD's job just even more dangerous. On some occasions, EOD operators are required to enter very hostile areas that place them in a position for attack or ambush.

Currently, Navy EOD is in the development phase of a combatives program for its operators. However, similar to the SEAL teams, the operational tempo dictates the success of a program into the normal routine.

3. Navy Expeditionary Combat Forces

The "Navy Expeditionary Combat Command (NECC) is a scalable force spanning the full range of military operations from Theater security to major combat" (NECC, 2010). NECC personnel bring a wide range of tasks warfare. From security operations, humanitarian assistance, and other broad areas of warfare, the NECC advertises the ability to work in all environments. Additionally, the NECC plays a pivotal role in providing support and combat related units to the war effort.

NECC personnel are required to receive pre-deployment training that consists of basic combat skills. The combat skills do include a few hours of hand-to-hand combat training. The fact that NECC personnel receive limited hand-to-hand combat training means two things: one, the training is already established in a curriculum and two, because training is already established, it is easier to focus on the quality and standardization of a combatives program to enhance skills.

4. Aviators

Technology develops at a rapid rate for the military. However, as technology increases, the same dangers remain the same for some jobs. This is the story for the pilots and crews that fly the planes for the U.S. Navy. We discussed the importance of the V-Five program, and why aviators need combatives training. With continued flights into harm's way in Iraq and Afghanistan, aviators still require training in self-defense.

5. Individual Augmentees

In contrast to a Sailor that deploys with a ship, squadron or unit, a Sailor who leaves their assigned unit or command to deploy individually or with a small group is known as an Individual Augmentees (IA).

- Navy Individual Augmentees Homepage (2010)

Individual Augmentees, or IA personnel can be selected from any warfare designation in the Navy. The selection is based on a volunteer and involuntary basis. For the Sailors selected, it is based on the need for an IA in a particular assignment in the war regions.

IA personnel are trained by the U.S. Army in combat skills prior to deployment. IA training facilities are located at over two dozen locations throughout the United States, and do provide IA members with a limited amount of MAC training.

6. Military Police

Military police have wide tasking nowadays due to Iraq and Afghanistan. Military police can be assigned anywhere that requires legitimate military law enforcement presence. In particular, police personnel are often selected to IA billets to assist in duties such as training host nation security forces or detainee operations.

Out of all the jobs in the Navy, we can argue that military police receives the most standardized training in combatives compared to other warfare assignments. We can also argue that due to the nature of their work, military police need to invest extensively in hand-to-hand combat training in order to maintain the advantage with an aggressor.

However, that is not good enough. There is no data to show that there is a consistent program fleet wide for military police. Military police command training is dependent on the command and how much they wish to train.

7. The Fleet

In this thesis, we describe the fleet as: personnel on ships and submarines, as well as shore installations. This is the point of contention for many folks to question why we need a combatives program. Many Sailors on ships and submarines will never step foot in a combat zone. However, the fleet is where a huge chunk of the IA duties are assigned. Additionally, we cover various jobs of a fleet Sailor later on this chapter that argues why combatives is needed as much for the fleet Sailor as a SEAL or EOD operator. A shipboard Sailor or submariner might not see combat abroad, but there is always a possibility that combatives might be needed to defend their ship.

When we discuss the fleet further, we must go back to the second reason why combatives is important to a serviceman. The fleet can use combatives as another method of team building. On a long deployment at sea, away from home, combatives can provide an outlet for positive growth in a Sailor.

The jobs listed are a collection of existing institutions in the U.S. Navy. We can argue that the difficulty of establishing a combatives system is not necessarily to prove its effectiveness, but to change the deep-rooted traditions of each institution.

E. “BASIC” JOBS THAT MAY REQUIRE COMBATIVES

Several basic jobs in the fleet require extensive combatives knowledge. The jobs are termed basic because they are typically a collateral duty for a Sailor on top of their primary assignment. Each job is a typical assignment seen aboard a ship or at a shore command. Although they are basic, a failure in any one of these assignments could lead to a catastrophic incident. The amount of combatives training that is taught at these levels is minimal or inconsistent.

1. Quarterdeck Watches

The “quarterdeck,” in Navy terms, is the initial entrance of a ship. When a visitor walks aboard a commissioned Navy ship, they are first greeted on the quarterdeck. The quarterdeck watch holds two major positions. One position is the official representative of the ship, and her commanding officer. The second position is security. The quarterdeck watch is essentially the last line of defense against an aggressor. Armed typically with a sidearm, the quarterdeck watch is considered one of the most basic duties for a Sailor.

Quarterdeck watches are not typically trained in hand-to-hand combat, although the escalation of force procedures that they are taught seem to require that knowledge. At the lowest levels, escalation of force procedures start at verbal orders (such as “STOP”) to neutralize an opposition. At the highest level, which is the last resort, deadly force is authorized in a situation that the quarterdeck watch deems life threatening or a matter of national security. The middle levels involve physical contact, from blocking, to restraint, to incapacitation. Once again, the levels are dependent on the judgment of the quarterdeck watch of the situation. As we discuss the duties of the quarterdeck watch, and their role as the “first and last line of defense” for the ship, we can comment that most quarterdeck watches in the Navy do not receive any form of combatives training to assist them in restraint, and incapacitation techniques.

2. Master at Arms

The Quarterdeck is the first and last line of defense. However, when there is time, the Master at Arms can provide some assistance. Designated as the duty “sheriff” on watch, the Master at Arms is in charge of various tasks such as issuing weapons, making sure watches are standing guard properly, and implementing shipboard security drills. An obvious duty as well for the Master at Arms is restraint of an aggressor or prisoner.

3. Gate Guard

A gate guard is another member of a ship or command that is initial security upon entering a compound, or walking on a pier to get aboard a ship. The sole purpose of the quarterdeck watch is to check for identification and provide additional security.

4. Shipboard Reaction Teams

Shipboard Reaction Teams is a collateral duty for certain members of a ship. Primarily assigned to personnel that are knowledgeable with weapons, the purpose of a reaction team is to defend the ship at all cost, or provide offensive firepower as a last resort.

5. VBSS

An acronym that stands for Vessel, Board, Search, Seizure, VBSS teams became a highlight to the Navy's force projection post-9/11, due to the increase in waterborne security throughout the globe. The rosters of VBSS teams are similar to reaction teams. They are picked from capable members of a ship's crew. By direction, they stop suspicious vessels, and perform an inspection of its personnel and cargo. VBSS missions are considered dangerous due to the element of the unknown when boarding vessels. VBSS teams must be prepared to restrain and neutralize aggressors if necessary.

6. Shore Patrol

The last of our basic assignments for an on duty Sailor, shore patrol is a team of Sailors assigned to walk the town at a port of call where Sailors are based. Shore patrol is tasked with patrolling areas with high concentration of Sailors to ensure they are upholding the rules and regulations of the U.S. Navy. When a Sailor breaks the rules or simply becomes unruly, it is shore patrol's duty to remove the Sailor and bring them back to the ship. Shore patrol is not armed with anything but a radio. In order to keep the peace, it is necessary at times for shore patrol to restrain a Sailor to prevent them for further harm or damage.

F. CONCLUSION

As we discussed the difference between the CNO Guidance for 2002 and 2010, we realize that the military is slowly evolving into a unified force. Prior to 9/11, the Navy was still developing its skills in regards to full spectrum warfare. Despite the overall capabilities of the Navy to effectively engage in warfare on all three environments (land, air, and sea), the Navy still does not act on the need for additional training in close

combat tactics. As the Iraq War draws down, the Afghanistan War increases in intensity. Concerns with troop rates and morale greatly affected the decision makers in assuring a balance to the number of deployments for each service member. The request for IA's remains strong, which means the chance for combat is still present.

The U.S. Navy has deep roots in combat. Despite a history that proves the need for combatives; the Navy does not embrace this need. Currently, the United States faces two land wars that stress military capabilities. Non-traditional ground fighters like the U.S. Air Force and Navy are tasked to share the burden of combat with its Army and Marine Corps brethren. The chances of hand-to-hand combat are minimal, but still present in some circumstances. Additionally, as we analyzed the different jobs in the Navy, we can argue that the possibility of self-defense is present in all areas to varied levels of degrees.

V. THE ENEMY, AND THAT ONE-IN-A-MILLION CHANCE

A. INTRODUCTION

We discussed the combatives programs for the U.S. Army, Air Force, and Marine Corps. We also discussed the lack of a combatives program for the U.S. Navy. Additionally, we traveled abroad, and found similarities as to why specific countries developed combatives programs for its militaries. In this chapter, we focus on the enemy. For the purpose of this thesis, we categorize the enemy as those persons who fight against the United States and its allies, from World War II until the present day. We argue that the reason for the development of an enemy combatives program is similar to that of any other combatives program: to develop a more technically proficient warrior, as well as boost confidence, and morale.

Statistically, we can argue that the chance of a U.S. servicemen engaging in hand-to-hand combat is minimal. As stated previously, the number of documented accounts in Iraq and Afghanistan for the U.S. Army is roughly 900. The number of Marine Corps events is roughly 35 cases. From almost ten years of fighting, when you divide 935 into the approximately 2,000,000 soldiers that cycle back and forth in the combat zone during that time, the percentage is very small.

B. THE ENEMY

While most nation states of the world advertise freely their combatives systems, the hand-to-hand combat methods of Al Qaeda, the Taliban, and other terrorist organizations is largely secretive. From combat experiences, confiscated material, and posts on popular sites such as YouTube, we are at least able to form an opinion that combatives is a consistent part of enemy training.

In World War II, the Japanese were a formidable enemy of the United States. Many soldiers lived the code of the Samurai, called Bushido. Bushido was a way of life that dealt with the disregard for fear and death. Death was inevitable to every person.

Bushido taught the Japanese to embrace it. When the war ended, the Japanese slowly developed into an ally for the United States. It was then possible to learn Japan's martial arts styles that proved effective against the U.S.

In the Korea War, American troops faced a North Korean force with elements of the Chinese military. Both countries were well versed in its national martial arts and proved formidable in combatives techniques. Additionally, martial arts proved an immeasurable ally in regards to mental strength, confidence, and courage.

In the Vietnam War, the North Vietnamese offered the first real look at the type of war the United States would fight in the future. Outnumbered, the North Vietnamese used the terrain to its advantage against the American fighting force. Using the strategy of surprise, and hit and run tactics, the North Vietnamese made every attempt to isolate American service members to either kill or kidnap. Additionally, the dramatic effects of unaccounted service members who disappeared into the jungle still remind many why we need to train to our best ability.

With current enemies of the United States and its allies, we see the same mentality that made previous enemies so effective. First, the enemy relies on a certain philosophy to mentally strengthen them. With the Japanese, it was Bushido and the Samurai tradition. With Al Qaeda for example, it is the extreme Islamist belief that Jihad creates a world free of non-believers. Teaching a philosophy that death brings great reward, Al Qaeda programmed its followers to not fear it. Second, the enemy believes that they are defending their homeland from invaders. This was the case with the North Vietnamese and their drive to fight for a war of duration, and not attrition. The North Vietnamese believed they were defending their homeland. We can compare this to how Americans fought during the Revolutionary War. These two reasons provide the mental strength for the enemy to go to war with an overwhelming force like the United States.

C. THE CURRENT OPPOSITION

You really want to learn how to rip somebody's throat out? I'm talking about damage to the inside so they drown on their own blood.

— Tarik Shah, talking to undercover agent, 2004 (Feuer, 2007)

Tarik Shah was convicted in 2007 on terrorist related charges. A musician, and an avid martial artist, Shah played the role of a normal New Yorker while secretly aspiring to become a martial arts instructor for Al Qaeda. Shah claimed experience in Jiu Jitsu, and had a hatred for Americans. He was more than willing to assist terrorists in killing Americans (Feuer, 2007).

In 2004, an *Encyclopedia of Afghan Jihad* was discovered in England during a security raid. The Afghan Jihad is an extensive encyclopedia that consists of eleven volumes (Dodd, 2006). The content of the encyclopedia contains very specific information in regards to terrorist tactics. In particular, one chapter emphasizes hand-to-hand combat. The contents of the *Encyclopedia of Afghan Jihad*, for obvious reasons were not released to the public. However, an index of the book was made available by the AP Press in 2001. Chapter Nine of the volumes is titled “close fighting” (AP Press, 2001). The description of the chapter is very brief, but provides a good picture of how coordinated the terrorists are in training: “Physical fitness; Aekido and other forms of self-defense; how to overcome a rival; attacking with knives and chairs, and moves to release from a grip” (AP Press, 2001).

Several videos are available on the internet that involves hand-to-hand combat training. Used as recruiting videos, the videos show very brief clips of one-on-one, hand-to-hand combat training. Elements of striking and takedowns show that the terrorists possess some formal training in martial arts. One video in particular, was one released prior to 9/11. Osama Bin Laden was in sections of the video, and it showed training footage of hand-to-hand combat training (Breitbart, 2005). This clearly shows that even prior to 9/11; Al Qaeda was training in combatives.

D. ACTUAL EVENTS

The following section provides three examples of hand-to-hand combat incidents in during the current wars. On each occasion, a service member’s primary and secondary weapon was unavailable in the situation, which left nothing but the hand-to-hand combat skill of the service member.

Then he jumped up on my back, broke my night-vision goggles off and starting getting his fingers in my eyeballs. I pulled him over, and when I hit down on the ground, it popped my shoulder back in.

— Master Sgt. Anthony S. Pryor, 2003, (Cosher)

Master Sergeant Anthony Pryor, a Special Forces Team Sergeant, eliminated four enemies in close quarters combat during a nighttime operation in January 2002. One enemy, pulled his night vision goggles off, and pulled his arm out of his socket. Facing the enemy in unarmed combat, Pryor used his survival skills to eliminate the enemy.

While Gibson was throwing punches, he could feel the man's hand reaching down to "grab a knife or something to attack me and then he told me in English he said 'bomb' and I realized he had a bomb on him and he was trying to clock himself off.

— SPC Joseph Gibson, 2008, (Cavallaro)

In April of 2008, SPC Joseph Gibson was an Army Ranger in Iraq. During a patrol, Gibson stepped into a ditch right on top of a suicide bomber. Unable to fire at his enemy due to the fact he was clearing the thick grass in front of him, Gibson jumped on top of his attacker. The attacker fired shots, but Gibson was able to position himself out of line of fire. Gibson was in unarmed combat with the enemy due to his close proximity. Both Gibson and the enemy were trying to reach a weapon. Gibson eventually overtook the bomber with a series of blows that allowed him to break free and kill the aggressor (Cavallaro, 2008).

During the Battles of Fallujah in 2004, United States Marines were involved in arguably some of the most intense fighting in Iraq. The large city was invested with small alleys and streets. Thousands of insurgents littered the city and hid within the houses. The Marines had to flush them out in a door-to-door fashion. During these battles, the Marines would partake in several hand-to-hand combat encounters (Peterson, 2004).

These three examples provide us with real data on the effectiveness of combatives training. Each soldier was faced with a life-threatening situation that tested their mental and physical capabilities. It is difficult to measure the variables of confidence, courage,

and warrior mindset. When we see examples of real combat situations, we can argue the necessity of combatives training. This is when we can gauge those variables very clearly and justify the benefits of combatives.

E. CONCLUSION

There is no question; the enemy is out to kill Americans and its allies. Although not as refined and polished as military systems, enemy hand-to-hand combat training is no less intense. When in a hand-to-hand combat situation, a service member must be prepared. The enemy employs every method at his disposal. The examples in this chapter provide a no holds barred look at the technical reason why combatives is necessary. Additionally, the attempts to train terrorists in martial arts skills through instructors and training manuals clearly show that the enemy is teaching a mindset that is not afraid to go face to face with its enemy.

As for the mental aspect, combatives training is just as effective to train the spirit of an adversary as it does an ally. We can explain the enemy thought process using the “hard target” approach. A hard target can be defined as a soldier that is difficult to defeat because of their posture. “The posture” is the offensive and defensive tools that determine the “target level” of a soldier. In this thesis, a hard target is a prepared and capable combatives warrior. On the opposite spectrum, a person that is not trained in combatives becomes an “easy target” or “target of opportunity” for the opposition. We can relate back to former Marine Corps Commandant Jones and his experience with the ROK Marines in Vietnam. The reputation of the ROK in combat allowed them to avoid many conflicts with the enemy. They trained themselves to become hard targets. In this regard, we must continue to train our military to become hard targets.

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VI. GETTING UP TO SPEED AND FINAL COMMENT

A. DOES THE NAVY NEED A COMBATIVES PROGRAM?

From the early traditions of the United States military in the late 18th century, until the late quarter of the 20th century, hand-to-hand combat training was largely considered an afterthought and trivial compared to the “real” rigors of training for combat. Any sort of development of combatives was slow, inconsistent, and eventually faded away, typically around the end of a major war, or conflict. However, despite the slow start, the current U.S. combatives programs are accelerating and maturing at fantastic speeds. Years of refinement improved each combatives program. In particular, ten years of brutal combat at the start of the 21st century honed combatives techniques. Most importantly, combatives is recognized not only for its self-defense, but for its ability to develop the overall character of a service member.

As we wrap up this thesis, we must now consider the very first question posed: Does the U.S. Navy need a standardized combatives program? Looking over the historical background, as well as the future challenges of the Navy, the answer is arguably yes. From a combat standpoint, U.S. Navy combatives training is needed far less than U.S. Army and Marine Corps components. In fact, if we only look from a statistical standpoint, and argue about the minuscule percentage that actual hand-to-hand combat does exist in war for the United States, we can dispute that combatives training should be at the least, de-emphasized. However, the point is often lost on the real purpose of combatives, which is the fundamental strength and argument why it must be kept: Combatives, when executed (trained) properly, is an essential tool to develop a person’s overall character and performance.

If we look at the effectiveness of combatives from a numbers standpoint, to be more clear, from a “how many actual incidents have we had” the argument is weak that we need to develop a program. However, if we look at combatives as a warrior development standpoint, the argument is very strong. Although combatives is a very physical training program, the physical aspect is just the surface of what is going on

inside a human being. Statistical data is not available currently on the psychological benefits of combatives in the military. Reason being, it is very difficult to measure areas that involve emotions. There is no data that shows a direct link between combatives and the overall performance evaluation of servicemen and women. On paper, combatives training is just one of many qualifications a service member undertakes during a career. The only current way to judge why combatives is needed is by what people are doing, and saying about it.

From an operational standpoint, we can still argue that the U.S. Navy does need a combatives program. As we move away from conventional warfare, we must embrace irregular warfare as the method of 21st century fighting. First, the United States military steadily increased emphasis on joint operations. What this means quite simply is that traditional service roles are being put aside for a more unified approach. As stated previously, all services are being asked to do things that traditionally are not required. In respect to the Navy, this comes specifically with IA's in the current land fight, as well as increased emphasis of SEAL and EOD teams. Second, the U.S. Navy has commitments on a fleet level that requires combatives skills. These skills include basic duties such as watch standing, shore patrol, security, law enforcement, and ship's reaction force assignments that require this knowledge. Additionally, more advanced duties include riverine operations, VBSS, special warfare to name a few. Also, we must not forget the need to add combatives in basic survival training for our pilots and aircrews. Third, as we follow the Navy guidance of slimming down to create a stronger, more flexible, and technically superior Navy, the lack of combatives training only counters the point. Having a Navy combatives program is proactive, and proves that the U.S. Navy is thinking ahead into the future of warfare, and to the development of its "warrior Sailors".

The United States Army began its combatives history by developing a system that would help them defend themselves in an unarmed combat situation. This system, thanks to Matt Larsen, became an ever-evolving system that adapts to the ever changing landscape of combat. More important though, Larsen and the U.S. Army developed and

nurtured a system that embedded itself in the very culture of Army life. MAC is a tool that not only enhances a soldier's war fighting ability, but also enhances a soldier's character development.

The United States Marine Corps, tested throughout history in the most difficult forms of combat, developed MCMAP to provide Marines the best possible chance of survival. However, tools for survival in the combat zone are secondary in MCMAP culture. MCMAP's design is to develop tools that build fundamentally strong ethical warriors. This warrior ethos is instilled to every Marine. Similar to MAC, the MCMAP program is part of every Marine's way of life.

The United States Air Force recognized the need for a combatives program. Piggy backing off of the MAC mold, the Air Force is developing a program primarily to help positively shape the warrior spirit into future Airmen, while also providing them skills that enhance survival in a combat environment. The Air Force recognizes that hand-to-hand combat is not likely for all airmen, but is possible for a scant few from time to time. However, this did not deter the Air Force from seeing the benefits of a combatives program. Emphasis is placed on the need for combatives to develop key areas of an Airmen's character.

Internationally, we can argue that there is no fundamental difference as to why certain countries have a combatives programs. There are usually only two answers: to develop that warrior spirit that is needed in combat and daily life, and to provide the technical skills to defend oneself, if needed, in battle. We can further argue that similar to American military systems, combative programs in the countries discussed in this thesis started out for a simple reason, and nurtured and developed into something more complex: to provide tools necessary for self-defense, and to build strong warriors of solid character. Once again, even internationally, combatives is also a fabric of daily military life.

Here are five reasons we can argue why combatives is good for the U.S. Navy:

1. Improves combat readiness (gets the Navy prepared for the 21st century way of joint operational war fighting)

2. Strengthens Navy Core Values (The Navy version of Ethical/Warrior Sailors)
3. Improves Physical Fitness
4. Improves Confidence
5. Develop Mental Strength in Tough Situations/Environments

B. IT STARTS WITH ORGANIZATIONAL CULTURE: CHANGE IS GOOD

The idea of, “it has never been done before, because we have never needed it” needs to change to, “it has to be done, because we might need it.” The most difficult part of establishing combatives into the United States Navy is changing the culture and turning the Navy away from the status quo. Similar to Matt Larsen’s struggles, the bureaucratic wheel must recognize that combatives is a necessary cog. Sometimes major change in the military is difficult. When you consider changing culture, you can count on change being very difficult. In order to do this in the simplest way, we must teach Sailors that combatives is a good thing.

If we change the culture of the Navy from the bottom up, the top-level officials in the Navy might recognize its importance. There will be many doubters, similar to the Air Force, as to why combatives is not needed. Between the Navy and the Air Force, we can easily argue that these two services have the least amount of incidents by far compared to the Army and the Marine Corps. However, the Navy needs to get on board with the real reason why combatives is embraced by the other services, and that is the opportunity to develop character and improve the overall capabilities of the Navy.

Changing culture is a slow process. It is on a generational timeline. From MAC’s and MCMAP’s inception, there were many skeptics. However currently, the majority of skeptics deal with the technical aspects of the programs (what combat technique is the best for a certain scenario for example), and not “why” the programs are still around. The first, best move for the Navy is to initiate the establishment of a training program. The Navy needs to establish a program that emphasizes the importance of combatives from

initial indoctrination. The justification is to change a mindset that is embedded in previous generations. To truly affect change for the long term, we must start with the next generation, and mold their mindset to embrace combatives.

C. STEPS TO ESTABLISHING A NAVY PROGRAM: A FOUR-STEP PROGRAM

1. Navy Leadership: Recognize, Initiate, Order, and SUPPORT

Prior to any further steps, and if any success is to be achieved, the leadership of the U.S. Navy must be on board. Leadership can use these four steps as guidance:

- a. Recognize
- b. Initiate
- c. Order
- d. Support

Navy leadership must finally recognize that combatives in the military is here to stay. This is the one time that the Navy needs to follow the lead of the other services. In the Marine Corps, it started with the Commandant issuing a USMC-wide message stating the importance of combatives in their daily life and training. The need for combatives must be recognized fleet wide, from the Admirals and Master Chiefs that lead the Navy, to the young Sailors that guide the Navy in the future.

The initiation of a program is the start of a long journey. MAC and MCMAP constantly refined its tactics and techniques from inception. Arguably, the toughest part of starting anything new is the mere effort of starting it. A necessity for the program's success is to put Sailors to task. The order to start Navy combatives should come from the top and be recognized from the bottom up as a necessary component. Upon initiation of the MCMAP program, further directive was given to all Marines, ordering them to qualify to the minimum standards of the MCMAP program.

Finally, as the Navy orders its Sailors to perform a function it feels beneficial, the Navy must provide them with the support they need. Support starts with positive

guidance and leadership, as well as time allocation, and areas for training. There is not one successful combatives program in the world that does not have the support of its leadership to move forward.

2. Beg, Steal, or Borrow MCMAP

MCMAP is recommended for the U.S. Navy. MCMAP is tried, tested and approved by countless operators in combat. It is a well-established system that does not need to be built from the ground up. Similar to the Air Force partnership with the Army, the Marine Corps has ready assets available to assist the Navy in combatives training and development. Also, the Marine Corps and the Navy operate together on various military fronts and understand each other's culture.

The Air Force appreciated the template created by Matt Larsen and his team. Tried and tested, MAC is a system the Air Force relates to. Using an already established system also saves countless of man hours in the development of a new system (that also might not be successful). MCMAP is a system that thousands of Sailors were already exposed. Additionally, future combative Sailors can relate to the Marine Corps method since both services are from the same service department.

When it comes to training, the United States Marine Corps is experienced in training Sailors. Two examples to cement this point home: at OCS, the United States Marine Corps provides intense and influential instruction to groom officer candidates. Second, the Marine Corps has MCMAP, which provided life saving instruction to Sailors assigned to Marine units.

The Marine Corps has multiple mobile training teams that are capable of training future Navy trainers in martial arts. Able to train any group of Sailors in all areas of the world, these mobile training units are vital to success. Once the first groups of trainers are trained, the Navy can spread the knowledge throughout the fleet. Additionally, along with mobile trainers, permanent trainers can be assigned to these locations to assist in development and training:

- a. Boot Camp
- b. ROTC
- c. OCS
- d. USNA

These locations represent another avenue to assist in cultural change in the Navy. From the recruit, candidate, Midshipmen level, the Navy can focus firmly on the development of the future of Navy warriors. By molding the next generation during initial military training, the Navy can move forward quicker to erasing cultural and status quo issues that might arise. Additionally, new Sailors are prepared to enter the battle quicker, because they received training.

3. Sailors Train Sailors

All service combatives programs use a “virus” type of network set up in regards to training. As the MCMAP instructors successfully train and qualify Sailors, those Sailors train other Sailors. It is through this process that the U.S. Navy will successfully spread combatives throughout the fleet. The Marines are very capable in their training; however, without the help of the newly trained combative Sailors, the spread of combatives will become a slow process that could prove detrimental. The Navy must task newly trained Sailors to train other Sailors at their respective commands or units.

4. Cut the (MCMAP) Umbilical: Establish the Navy Self-Defense Program (NSDP)

The Air Force is well on its way to cutting the umbilical from the Army. An Air Force combatives manual is due out for official release very shortly. Until then, the Army is shadowing the Air Force and providing support in moving the combatives program forward.

After we successfully embed MCMAP into our foundations, there will come a time when the U.S. Navy needs to move forward and establish its own program. When will we know to cut the umbilical? The United States Marine Corps has MCMAP

training available at every installation owned or occupied by the Marines. Although this benchmark is not exactly necessary for umbilical cutting, it is a good guideline to where the Marines are with their development. A critical concern for maturity of Navy combatives is to make sure that access (trainers and facilities) is available for every Sailor to train. Key objectives for success in order to cut the umbilical are:

- a. Established Navy Self-defense Program Headquarters
- b. Navy instruction/guidance manuals/certification criteria
- c. Enough Navy trainers to send the Marine trainers home
- d. Recognize ORM

A primary headquarters must be established to become the subject matter expert in Navy Combatives as well as account for standards and instructions in combatives. From this headquarters, the Navy can task instructors and mobile teams to help train Sailors at various commands or deployed areas.

D. NSDP: PROGRAM DEVELOPMENT

1. Emphasize Core Values

The Navy Self-defense Program needs to emphasize the three core values that shape the Navy: Honor, Commitment, and Courage.

With Honor, NSDP honors the sacrifice of warriors in the past by training and shaping warriors of the future. Combatives instills the ideal of honor by respecting other shipmates, building character, and establishing a foundation of integrity through NSDP. With Commitment, the Navy recognizes the need to prepare itself for an increased role in the joint operational world. Also, NSDP shows the commitment the Navy has to developing future Sailors for war. With Courage, NSDP teaches combatives to instill the character traits that make U.S. Sailors the very best in the world at what they do.

2. Emphasize Physical Fitness

The U.S. Navy must recognize that combatives can be an easier outlet to physical fitness than by traditional methods of running and swimming. For example, a submariner

or a deployed at sea Sailor has limited choices to improve physical fitness. Over time, with the lack of physical exercise, we see a drop in physical capability. With NSDP in place, combatives can be taught in very limited spaces and still benefit the Sailors.

If we refer to the U.S. military combatives systems already in place, combatives provides great benefits to the soldiers and airman. The exercises and sparring sessions have the same benefits to cardio and strength training as traditional exercises. Additionally, military combatives is a recognized form of exercise.

3. Depth and Requirement of Training

MCMAP uses the belt system, while MAC uses the level system. In order to maintain continuity, NSDP should retain the belt system designed by MCMAP. As a matter of common sense, a submariner does not require the same amount of training as a Navy SEAL in combatives. However, a standard must be set that carries the baseline for future Sailors. The United States Marine Corps set the standard that all Marines qualify at a minimum, tan belt. The lowest belt in the MCMAP ranking system is a reasonable request for any able bodied service member. More importantly than belt qualification, ensuring that a Sailor maintains his or her qualification is critical. It is pointless to qualify in a skill if over time the techniques are not practiced and maintained. Similar to the semi-annual physical readiness test, the Navy should require mandatory re-qualification for combatives readiness. Combatives, like many qualifications, is a perishable skill that needs constant refinement. In this thesis, we can use military gun qualifications as an analogy to the importance of refresher training. However, an argument can be made that some Navy occupations require less frequent training. Here is an example of time frames of refresher training:

- a. Deployment (to include IAs): Refresher training mandatory within three months of any operational deployment
- b. EOD/SEALs: Annual Training, due to frequent deployments in combat zones.

c. Pilots/Air Crew: Annual Training, due to frequent deployments in combat zones.

d. SEABEES: Bi-Annual Training

e. FLEET: Bi-Annual Training

4. Development Guidelines

The success of all combatives programs requires constant refinement and feedback from its users. Combatives instructors should be their own harshest critics. In order to survive, combatives must stay relevant and effective to the current operation situation. As we discussed in Chapter Two, Matt Larsen uses an excellent outline for his Army system to maintain readiness:

Standards: High standards in the U.S. Navy are expected. A self-defense program should not be installed if standards are not created and met. The Marine Corps set the standard that all Marines certify at the minimum, the rank of tan belt. For the Navy, this should be the minimum as well. Additionally, Sailors must be held accountable for achieving these standards.

Systemic Training: The Navy cannot take short cuts and rush training. A strong NSDP foundation, with gradual, positive progression creates a long term return.

Maintain Qualifications: Similar to issues with maintaining physical education in the military, U.S. Navy Sailors must be encouraged, ordered, and provided adequate time to maintain NSDP techniques.

Competition: As we recall back to the history of the Army and Air Force in regards to combatives, we can see that competition improves many aspects of a servicemen's technical ability and character. Competition sharpens the mind and technique. It provides a Sailor an opportunity to test what was learned. Most importantly, through command level competition, it brings units closer by providing a venue to come together.

Drills: This area goes hand-to-hand with continuous training; Sailors must drill in their technique to make them a natural part of their instincts.

Live Training: Drilling can only do so much for a Sailor. One on one training with an opposing force brings realism of combat while providing a safer avenue for training.

Situational Training: The U.S. Navy needs to integrate lessons of NSDP into exercises such as general quarter drills, security reaction force exercises, or operational scenarios for land based teams.

Feedback: After action reports and feedback is crucial to the development and maturity of the program. Every step must be made to allow for critical feedback of NSDP.

E. CONCLUSION

During every period of warfare in the 20th century, the military services of the U.S. Army and Marine Corps developed programs to help with unarmed tactics. Even in World War II, the U.S. Navy and Air Force joined in to train specific units of combatives. However, necessity of removing combatives training for other programs was a dominant theme throughout the 20th century as well. The idea of teaching folks to fight to develop character and warrior skills was never understood until just recently. Despite minimal experiences in combat situations, several combatives programs still exist because it helps develop a better soldier. Confidence, character, and a drive to become a superior warrior are common results to combative practitioners.

The United States military has two proven combatives programs with MAC and MCMAP. The Air Force developed a program that is similar to MAC, and took dramatic steps in the past few years to becoming fully operational. MCMAP provides a perfect vessel for the future of Navy combatives. Through MCMAP, the U.S. Navy can develop a course that can cater to the numerous jobs throughout the fleet. As a future goal, a Navy Self-defense Program should be developed. As an end goal, all services should mold together to develop a joint combatives programs that is interchangeable with each service requirement.

At the time of development, there was not a critical need for combatives in the Army and Marine Corps. However, both programs were developed because it was

understood that one day that need might become critical. The United States Army and Marine Corps used proactive thinking to develop warriors for the long term. The U.S. Air Force, realizing it was facing a more direct role in Iraq and Afghanistan, thought proactively, as well to teach its Airman fighting skills.

The Navy lacks a combatives program because it is programmed to accept the past as the standard. The Navy is too multifaceted to not recognize the need for combatives. Once the Navy adjusts course and heads toward 21st century joint operational thinking, the need for combatives becomes quite clear. In order to fully harness a Sailor's abilities, combatives is needed to test his or her mettle. The Navy needs to change its culture, embrace the warrior spirit, and recognize that combatives fits perfectly with the core values and the highest traditions of the Navy.

APPENDIX A: A LITTLE GAME THEORY TO DRIVE THE POINT

A. THE SITUATION

Historically, there was insignificant need for a standardized U.S. Navy Combatives Program. However, the operating environment has changed. The mission of the Navy is changing. The current battlefield, which has typically been largely a one dimensional front led by the United States Army, requires a more dynamic, all encompassing approach. Emerging oppositions and increased military commitments on a global scale expanded the roles of all service members. The most dramatic change is to the Navy Sailor. Servicemen, in particular, Sailors, are being assigned to nontraditional tasks. No longer are Sailors solely charged with duties on board warships. Multiple wars placed both Navy SEALs and EOD teams in the forefront of direct combat operations. Military augmentation plans tasked fleet Sailors on assignment to combat zones. Additionally, along with these duties, the United States Navy still requires Sailors to stand watch aboard warships, as well as maintain roving base security and shore patrol. These tasks all require the ability of a Sailor to defend from the opposition.

Currently, standardized training in self-defense is not provided for the United States Navy. Also, the Navy has historically lacked combatives type training. Hand-to-hand combat training for the Fleet Navy is often overlooked. Even our current SEAL (Sea, Air, and Land) and EOD (Explosive Ordnance Disposal) teams, who share the brunt of frontline operations, do not receive adequate training. Additionally, the Navy has no proactive plans for the future in establishing a standardized program. This type of thinking is the same type of thinking that did not believe in the need for joint operations years ago, or another example, the same type that could never envision women in combat, or even a Sailor in desert fatigues. Now, there are plenty of females carrying a weapon, and plenty of Sailors in harm's way in the operational response areas of Iraq and Afghanistan. Providing a Navy-wide combatives program helps develop and enhance the overall skills of a Sailor. Even more important, a self-defense program provides a Sailor with more confidence in difficult situations.

So, are Sailors prepared, and what effects does a combatives program have on the United States Navy? We use game theory to find the answer.

B. THE GAME

Figure 3 illustrates the set up of the game. A combat ready U.S. Navy Sailor is one that has gone through a standardized U.S. Navy Combatives Program. A non-combat ready Sailor is a Sailor in the Navy, who has not participated in any kind of hand-to-hand training. In regards to the “opposition,” the “opposition” is defined as someone that challenges a U.S. Navy Sailor in a hand-to-hand combat situation (whether it is an enemy combatant in a combat zone, or a security/law enforcement situation that requires a hostile individual to be detained). The two options for the opposition are to attack, or not to attack, depending on the situation.

There are four possible results within this game as described below:

AC: U.S. Navy Sailor is combat ready; opposition attacks

AD: U.S. Navy Sailor is combat ready; opposition does not attack

BC: U.S. Navy Sailor is not ready for combat; opposition attacks

BD: U.S. Navy Sailor is not ready for combat; opposition does not attack

		<u>Opposition</u>	
		Attack	No Attack
		C	D
<u>U.S. Navy Sailor</u>	Combat Ready A	AC	AD
	Not Combat Ready B	BC	BD

Figure 3. U.S. Navy Sailor Vs. Opposition

C. ASSUMPTIONS

Now that the game has been defined, it is important to address the assumptions of the game. Here is the list of assumptions:

1. One U.S. Navy Sailor vs. single opposition: To simplify, this game analyzes only the outcomes of a singular Sailor vs. a singular opposition. Multiple Sailors or multiple oppositions are not analyzed in this round of the game.
2. Both U.S. Navy Sailor and opposition are playing rationally.
3. Both U.S. Navy Sailor and opposition maximize their individual strategy.
4. This is a hand-to-hand combat situation. All things being equal, primary and secondary weapons are removed from the situation, leaving a face to face confrontation that must be resolved using hand-to-hand combat or surrender.

D. THE PAYOFFS

We now replace the letter variables in Figure 3 with rankings, now listed in Figure 4.

		<u>Opposition</u>	
		Attack	No Attack
		C	D
<u>U.S. Navy Sailor</u>	Combat Ready A	2,2	4,3
	Not Combat Ready B	1,4	3,1

Figure 4. Payoff Projection for U.S. Navy Sailor Vs. Opposition

U.S. Navy Sailor Options (Best option is 4 to Worst is 1):

- 4: U.S. Navy Sailor is combat ready; opposition does not attack
- 3: U.S. Navy Sailor is not ready for combat; opposition does not attack
- 2: U.S. Navy Sailor is combat ready; opposition attacks
- 1: U.S. Navy Sailor is not ready for combat; opposition attacks

Opposition Options (Best option is 4 to Worst is 1):

- 4: Opposition attacks; U.S. Navy Sailor is not ready for combat
- 3: Opposition does not attack; U.S. Navy Sailor is combat ready
- 2: Opposition attacks; U.S. Navy Sailor is combat ready
- 1: Opposition does not attack; U.S. Navy Sailor is not ready for combat

Figure 5, clearly shows that the U.S. Navy Sailor indisputably has a dominant strategy to be combat ready. In either situation, when the opposition attacks, or does not attack (C, D); the U.S. Navy Sailor has a greater payoff when combat ready. The arrows plainly show that the benefit of being combat ready is a better strategy than not being combat ready (from 1, 3 to a higher payoff of 2, 4).



		<u>Opposition</u>	
		Attack	No Attack
		C	D
<u>U.S. Navy Sailor</u>	Combat Ready A	2,2 	4,3 
	Not Combat Ready B	1,4	3,1

Figure 5. U.S. Navy Sailor Actions

Figure 6, shows the actions of the Opposition. Unlike the U.S. Navy Sailor, the Opposition does not have a dominant strategy. In both cases (C, D), the Opposition's

moves are *ultimately determined by the combat readiness of the U.S. Navy Sailor*. The arrows show that the Opposition favors a non-combat ready U.S. Navy Sailor.

		<u>Opposition</u>	
		Attack C	No Attack D
<u>U.S. Navy Sailor</u>	Combat Ready A	2,2	4,3
	Not Combat Ready B	1,4	3,1

Figure 6. Opposition Actions

Figure 7 shows a U.S. Navy Sailor vs. Opposition, and in this figure, a Nash Equilibrium is revealed. A Nash Equilibrium is “a set of strategies, one for each player, such that no player has incentive to unilaterally change her action. Players are in equilibrium if a change in strategies by any one of them would lead that player to earn less than if she remained with her current strategy” (Game Theory.net, 2006).

		<u>Opposition</u>	
		Attack C	No Attack D
<u>U.S. Navy Sailor</u>	Combat Ready A	2,2	4,3
	Not Combat Ready B	1,4	3,1

Figure 7. U.S. Navy Sailor Vs. Opposition Actions

In summary, the Nash Equilibrium (revealed more clearly in Figure 8); clearly shows the U.S. Navy Sailor is better off with a combat ready stance, while the opposition is better off not attacking the combat ready opponent. However, as we move unto Utility gaming, we will see what moves to consider, and if the U.S. Navy Sailor remains dominant.

		<u>Opposition</u>	
		Attack C	No Attack D
<u>U.S. Navy Sailor</u>	Combat Ready A	2,2	4,3
	Not Combat Ready B	1,4	3,1

Figure 8. Nash Equilibrium

E. UTILITY GAMING

Utility gaming gives us a better idea of what is preferred for each side. Here is a look at the options available:

U.S. Navy Sailor:

10 (Best): U.S. Navy Sailor is combat ready but does not have to fight opposition.

9 (Next Best): U.S. Navy Sailor is not combat ready and does not have to fight opposition.

6 (Least Best): U.S. Navy Sailor is combat ready and has to fight opposition.

1 (Really bad, worst): U.S. Navy Sailor is not combat ready and has to fight opposition.

Opposition:

10 (Best): Opposition attacks and U.S. Navy Sailor is not combat ready.

7 (Next Best): Opposition does not attack and the U.S. Navy Sailor is combat ready.

3 (Least Best): Opposition attacks and U.S. Navy Sailor is combat ready.

1 (Worst): Opposition does not attack and the U.S. Navy Sailor is not combat ready.

As we analyze the options above in Utility gaming, the best options for the Sailor is for the opposition not to attack. A combat ready Sailor and a non-combat ready Sailor almost share equal attention with payoffs of 10 and 9. A payoff of 6 is given to a Sailor that is combat ready and has to face an opposition attack. However, this number is drastically higher than facing opposition that has minimal combat readiness.

The opposition prefers the U.S. Navy Sailor to not be combat ready, giving a 10 on the scale, for the optimal setting of attacking an untrained U.S. Navy Sailor. The opposition is not without intelligence, and understands the formidable task of dealing with a combat ready Sailor. Therefore, the opposition chooses to not fight a combat ready

Sailor for a ranking of 7, its next best option. Closing out the bottom options, the opposition would rather not choose to fight a combat ready Sailor, but prefers this option over not doing anything at all against a Sailor that is not combat ready.

Figure 9 shows the best options for both U.S. Navy Sailor and the opposition. Similar to the previous game we played, the preferred choice for the U.S. Navy Sailor is to maintain combat readiness. In regards to the opposition, the best option is to wait for a non-combat ready opponent. This example shows an example of what is occurring with the wars in Iraq and Afghanistan. The opposition waits for unsuspecting U.S. servicemen and then move in to attack. In some situations, the opposition faces off with combat ready opponents, but in other situations, the opposition payoffs are maximized with non-combat ready troops.

		<u>Opposition</u>	
		Attack	No Attack
<u>U.S. Navy Sailor</u>	Combat Ready A	6, 3	10, 7
	Not Combat Ready B	1, 10	9, 1

Figure 9. U.S. Navy Sailor Vs. Opposition Utility Gaming

F. STRATEGIC MOVES

With strategic moves, we look at the big picture of warfare. In this model, we replace the values of C (Attack), and D (No Attack), with Unconventional (for C), and Conventional (for D). Conventional Warfare is defined as “a form of warfare between states that employs direct military confrontation to defeat an adversary’s armed forces...” (DOD, 2007, p. 7). With this definition of conventional warfare, we can argue that

unconventional warfare involves indirect methods to attain success. The argument is, with a large concentration of military forces, the chances of an individual engaging a singular enemy in a hand-to-hand combat situation is minimal. However, if outnumbered and outgunned, the opposition might change from a conventional style to an unconventional method of attack. For the purpose of this game, we argue that an unconventional method of an attack is to attempt to single out a soldier, or Sailor.

In this strategic moves model, we look at the outcomes of the U.S. military against the opposition. Here are the assumptions:

1. Both U.S. and opposition are equally matched. However, the U.S. is either combat ready or not. The opposition employs conventional tactics, or unconventional tactics.
2. Both the U.S. and opposition are playing rationally.
3. An unconventional attack is an attempt to single out a soldier or Sailor in attempt to kill or kidnap them.
4. Combat ready, for the purpose of this model, is defined as having combatives training.

Matrix Values:

- A: U.S. is combat ready.
- B: U.S. is not ready for combat.
- C: Conventional Attack.
- D: Unconventional Attack.

Here are the new payoffs for strategic moves.

U.S. Options (Best option is 4 to Worst is 1):

- 4: U.S. is combat ready; opposition uses conventional attack.
- 3: U.S. is combat ready; opposition uses unconventional attack.
- 2: U.S. is not combat ready; opposition uses conventional attack.
- 1: U.S. is not ready for combat; opposition uses unconventional attack.

Opposition Options (Best option is 4 to Worst is 1):

- 4: Opposition uses unconventional attack; U.S. is not combat ready.
- 3: Opposition uses conventional attack; U.S. is not combat ready.
- 2: Opposition uses unconventional attack; U.S. is combat ready.
- 1: Opposition uses conventional attack; U.S. is combat ready.

Figure 10, shows a compilation of the payoff matrix with details of each move, as well as the location of the Nash equilibrium. In strategic moves, both sides have a dominant strategy. The U.S. Military has a higher payoff of a 3 in the combat ready row. The opposition has a higher payoff of 2 in an unconventional attack.

		<u>Opposition</u>		
		Conventional	Unconventional	
<u>U.S. Military</u>	Combat Ready A	4, 1	3, 2	3
	Not Combat Ready B	1, 3	2, 4	1
		1	2	

Figure 10. Strategic Moves Payoff Matrix

Figure 11, shows the outcome if we play the game without communications. In strategic moves, without communications, both sides play conservatively. As Figure 11 shows, the U.S. military and the opposition would reach a saddle point at AD, with a payoff of 3, 2.

Its name derives from its being the minimum of a row that is also the maximum of a column in a payoff matrix, which corresponds to the shape of a saddle. By choosing a strategy associated with this outcome, each player obtains an amount at least equal to his payoff at that outcome, no matter what the other player does.

- Definition of “saddle point,” (*Encyclopedia Britannica* 2010).

		<u>Opposition</u>		
		Conventional	Unconventional	
		C	D	
<u>U.S. Military</u>	Combat Ready A	4, 1	3, 2	3
	Not Combat Ready B	1, 3	2, 4	1
		1	2	

Figure 11. U.S. Vs. Opposition, Strategic Moves, Without Communications

This payoff might not be the optimal solutions for both players so we continue further to see if we can optimize payoffs. The next game is played with both sides communicating their intentions. In strategic moves, with communication, one side moves first, and then the next side moves sequentially after.

In Figure 12, the U.S. Military moves first:

If U.S. does A, then the opposition does D, for a payoff of 3, 2.

If U.S. does B, then the opposition does D, for a payoff of 2, 4.

3, 2

2, 4

Figure 12. U.S. Military Moves First

The best option for the U.S. is to choose 3, 2. The U.S. Military has a better payoff in the combat ready row with a 3, instead of a 2 (which the opposition would beat with its 4) in the non combat ready row.

In Figure 13, the opposition moves first:

If the opposition does C, then the U.S. does A, for a payoff of 4, 1.

If the opposition does D, then the U.S. does B, for a payoff of 1, 3.

4, 1

3, 2

Figure 13. Opposition Moves First

The best option for the opposition, if it moves first, is 3, 2. In both situations, if the U.S. moves first, or if the opposition moves first, the best outcome for both players is 3, 2. This is the same outcome without communications. Right now, the payoff remains the same. What if each player threatens each the other?

In Figure 14, the U.S. military threatens, and wants D:

If opposition plays C, the U.S. plays B, for a payoff of 1, 3.

Normally, if the opposition plays C, the U.S. plays A, for a payoff of 4, 1.

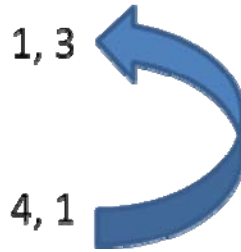


Figure 14. U.S., Not a Valid Threat

We can see that the U.S. military does not have a valid threat.

In Figure 15, the opposition threatens, and wants B:

If the U.S. plays A, then the opposition plays C, for a payoff of 4, 1.

Normally, If the U.S. plays A, then the opposition plays D, for a payoff of 3, 2.

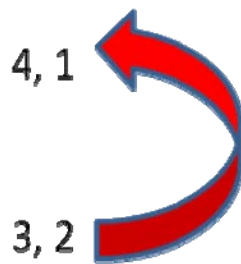


Figure 15. Opposition, Not a Valid Threat

This threat is not valid. The U.S. improves from 3 to 4 while the opposition drops from a 2 to 1. Let us see what the U.S. does.

If the U.S. plays A, then the opposition plays C, for a payoff of 4, 1.

If the U.S. plays B, then the Opposition plays D, for a payoff of 2, 4.

The best outcome for the U.S. is A, for a payoff of 4, 1. In summary, the threat does not work.

In Figure 16, the U.S. military promise; wants C:

If the opposition plays C, the U.S. will promise to play B, for a payoff of 1, 3.

Normally, if the Opposition plays C, the U.S. will promise to play A, for a payoff of 4, 1.

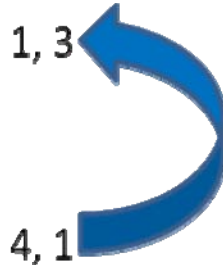


Figure 16. U.S., Not a Good Promise

This promise helps the Opposition. Which eliminates $4, 1$. However, the opposition will actually play this way:

Opposition plays C, U.S. plays B, for a payoff of $1, 3$.

Opposition plays D, U.S. plays A, for a payoff of $3, 2$.

The opposition chooses a payoff of $1, 3$, which is better than the without communications payoff, and is not a good promise for the U.S. to make.

In Figure 17, the opposition promises, wants B:

If the U.S. military plays B, the opposition promises to play C, for a payoff of $1, 3$.

Normally, if the U.S. plays B, the opposition would play C, for a payoff of $2, 4$. In this case, the promise actually hurts the U.S. so it is not consider a valid promise.

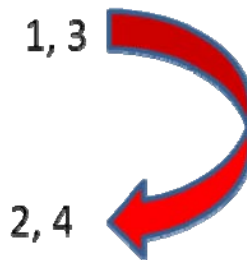


Figure 17. Opposition, Not a Good Promise

To summarize the game of strategic moves, the U.S. can only benefit from being combat ready. In all situations, the outcome of the U.S. favors being combat ready. Of

course, we are dreaming to think that our attackers would communicate whether or not they play conventional or unconventional. This model is an example to drive the point across that being prepared (in this case, in combat readiness) provides a better payoff than not being prepared. With conservative moves, the U.S. has the advantage with the opposition by way of a 3, 2 outcome. However, as the game is played on, utilizing communication, the U.S. can still gain the advantage by moving first. The opposition does have one advantage, and that is if the U.S. promises. If the U.S. promises to play conventional, the opposition plays unconventional since that is the better payoff. Therefore, in this situation, the opposition should make the U.S. promise to play conventionally, which would lead right into the opposition's advantage. Additionally, the advantage favors the opposition when it positions itself against a non-combat ready opponent. The strategic moves example shows an obvious picture of the need for the U.S. to become combat ready to gain the tactical advantage.

G. SECURITY

The next example, we determine each player's security level. The U.S. and the opposition try to maximize their individual payoffs and minimize the opponent's payoffs. The U.S. Military is listed as the blue arrows, with the opposition being the red arrows. In Figure 18, the opposition is more comfortable moving over to an unconventional attack to defeat the U.S. In Figure 19, despite the opposition using either conventional or unconventional tactics, the U.S. is more secure in a combat ready status.

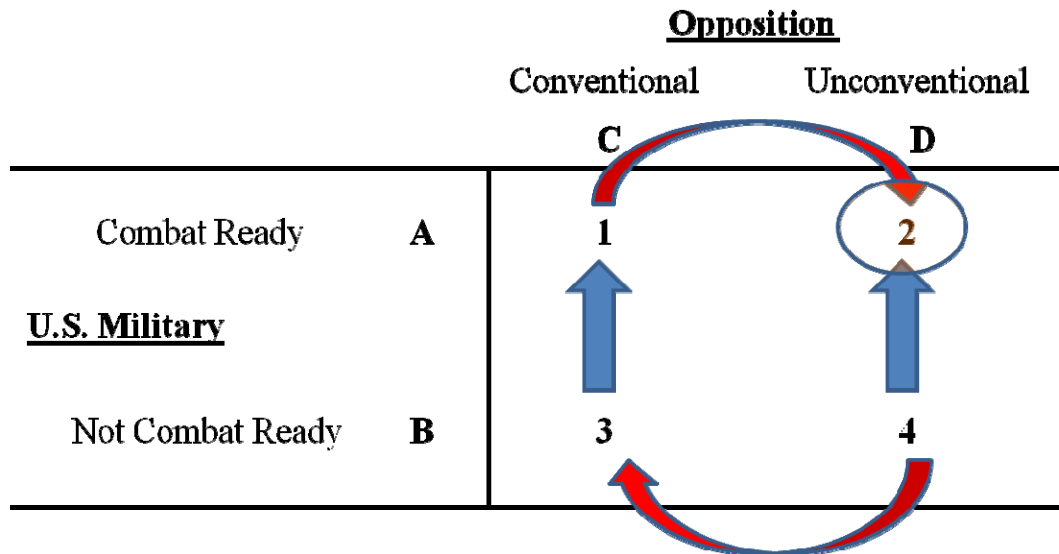


Figure 18. Opposition Security Levels

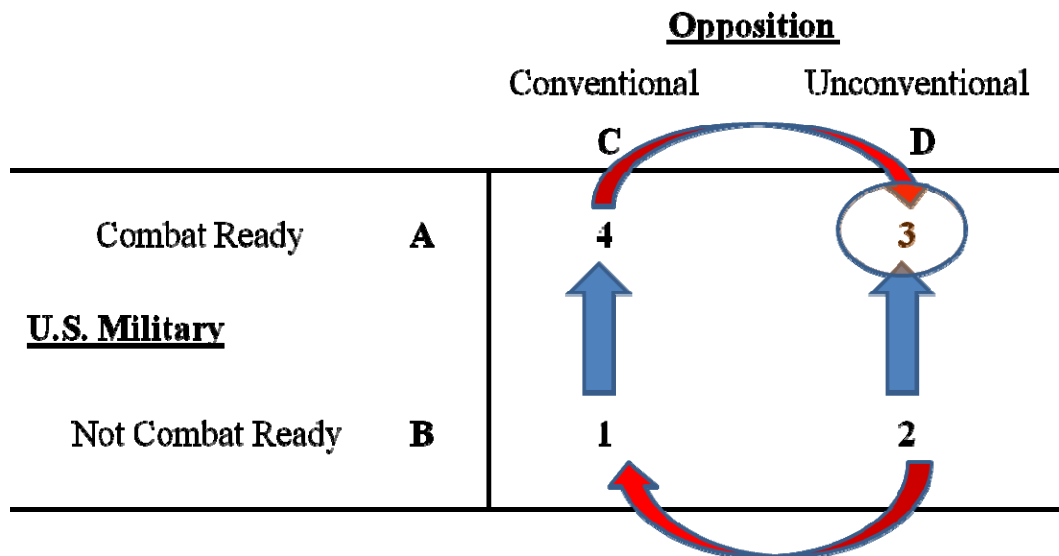


Figure 19. U.S. Security Levels

Figures 18 and 19, show a consistent trend to what the U.S. faces currently with the wars in Iraq and Afghanistan. The U.S. is facing an enemy that finds the security in unconventional warfare. The only thing that determines the fate of the opposition is how the U.S. prepares itself for battle.

APPENDIX B: LITERATURE REVIEW OF MILITARY COMBATIVES

Matt Larsen (2007) discusses in his article about Army combatives that it took over 230 years for the Army to develop a program. Why did it take over two centuries to develop a program? The need has always been there. From the first Continental soldiers of the Revolutionary War, to the soldiers that stormed the city of Baghdad in 2003, the likelihood of hand-to-hand combat was and still is inevitable. However, in his article, he does not address the lack of need; instead, he addresses other outlying issues that constantly hindered the development of an established program. In Larsen's words, "we have a comprehensive Combatives program that begins in initial military training and carries through to the way units are training and fighting" (2007). Combatives programs existed prior to the establishment of the "comprehensive program" described by Larsen, but they were not complete. In some cases, combatives programs were hastily put together, with no real methodology in teaching. In other cases, inappropriate instructors were selected. For example, Larsen (2007) describes many situations where civilian instructors were hired to teach combat hardened soldiers. The training was not realistic to the realities of combat. In the end, the battle for a combatives program only led to many countless man hours and military dollars lost. Not to mention the lack of quality training that was missed out by soldiers who required it.

Larsen's article is a perfect lesson in what not to do, and what was done, to fix the issues that apparently plagued the early development of Army Combatives. Despite his success in creating a program, Larsen still believes in improvement for the future. He also sees the pitfalls that come from being too complacent in training. This is not necessarily from a combat perspective but more an administrative perspective. He believes it is important to remain significant; otherwise the huge Army machine might erase his version of combatives. On this note, Larsen relies on eight principles to help guide in the success of the Army Combatives program he created:

1. Standards
2. Systemic Training

3. Continuous Training
4. Competition
5. Drills
6. Live Training
7. Situational Training
8. Combat Feedback

Marine Corps Captain, Jamison Yi, discusses the development of the Marine Corps Martial Arts Program in his article titled, *MCMAP and the Marine Warrior Ethos* is quoted as saying, “MCMAP’s overarching purpose is to mold and strengthen, and culture” (Yi, 2004, p. 20). There is a more spiritual approach to the Marine Corps method of hand-to-hand combat training. Yi’s article focuses more on the warrior mindset than the actual application of physical combat training. The hand-to-hand combat is described in his article, along with the basic foundations of what the MCMAP consists of, but it is more the exterior of what the program is really trying to teach. He argues that through hardened hand-to-hand combat training, a Marine develops into a better, more cultured individual. The brutal hand-to-hand combat training is just a vessel to transform a regular soldier into one of good moral and ethical qualities. In addition, the training instills confidence, courage and the fighting spirit that is the trademark of the Marine Corps. Yi (2004) describes in his article that MCMAP was developed two decades after the Vietnam War, following a push from the Marine Commandants of that period to establish a solid warrior ethos.

Matt Larsen and Captain Yi’s article both discuss areas of importance in the establishment of a Self-defense Program: character and consistency. Larsen discussed the need for a consistent program to help develop Army soldiers. Realizing the training would not be perfect, Larsen believed in the benefit of consistency. Yi’s article addresses the character building importance of a program. Both articles answer the question of why a program is important. However, the detail of developing a program is vaguely mentioned. Larsen (2007) mentions that the Army preferred “quick fixes” to resolve the

combatives problem. Similar to the Army Combatives, the Marine Corps long history of combat only saw the creation of a program in 1999. There are questions that need answering such as: Why did it take so long? What obstacles were in the way? What sacrifices were made to create each program? Were there previous programs that were canceled prior to developing the right one?

A similar theme occurs with Erik Holmes article about the establishment of an Air Force Combatives system. As Lt Col. Adelson, Deputy Chief of Education and Training comments, “We have always produced the smartest airmen ... ready to go out and do the mission ... but now we are producing warriors. The Air Force combatives is just another facet of that warrior production” (cited in Holmes, 2004). The Air Force followed the mold laid down by Matt Larsen. In fact, Matt Larsen was asked to assist in the development of the Air Force program. Still a new program, the Air Force is expanding its program to reach all airmen. Currently, only select airmen, to include commandos, security personnel, and Officer Candidates receive combatives training. However, the curriculum is developing and the Air Force anticipates airmen wide training in the very near future. The only pitfall that the Air Force is facing currently is the execution and logistics of training all airmen. Finally, one key quote in this article that a Sailor can relate to is the need for combatives training despite their lack ground fighting history. Holmes (2004) quotes an Air Force flight commander, “Even if they never deploy, if they’re somebody that just sits behind a desk, they now have more confidence and a slightly different attitude than what airmen of the past might have had.” This mentality steals the Marine Corps playbook of warrior ethos. Many of the same questions can be asked from this literature: Why did the Air Force feel there was a need for combatives? What obstacles were faced?

A look back in combatives history takes us to Lieutenant Colonel Rex Applegate’s “*Kill or Get Killed*” book. An official Marine Corps Publication that is still relied on heavily by the Marines to this day, *Kill or Get Killed* was written by Applegate during World War II. Applegate felt the need to develop a book that not only can prepare soldiers in combat in foreign lands, but also ready security forces on the home front regarding domestic issues.

Two other notable combatives manuals in the early twentieth century are credited for establishing the groundwork for many of the current military combative systems. The first manual, *Scientific Self-defense*, was written by British soldier William Fairbairn after World War I. Fairbairn was a self-defense instructor for the Shanghai Municipal Police prior to World War II, and then instructed Allied Special Forces during World War II. His manual was written specifically for law enforcement officials during an era and location in China, where the possession of weapons was minimal, and the reliance of hand-to-hand combat was common. One important note to Fairbairn's teachings, Lieutenant Colonel Applegate studied under William Fairbairn prior to the publishing of *Kill or Get Killed* (Kill or Get Killed, 1943, p. IX).

The second manual, *Combato*, was written by a Canadian soldier, Corporal Bill Underwood. Similar to Fairbairn, Underwood developed his manual to assist primarily law enforcement, but the techniques easily found use in the military field, specifically during the height of World War II. Underwood states, "The lessons which are presented will certainly prove sufficient in every emergency" (Underwood, 1943, p. 2). Fairbairn solidifies Underwood in the preface of his book by stating, "everyone should have some knowledge of the art of self-defense in case of emergency" (Fairbairn, 1931, p. 3). Both manuals laid the foundations for several military combatives programs throughout the world.

Techniques developed by Fairbairn and Underwood evolved, and were refined for use in the modern combative arena. Both manuals recognize the need to not only teach soldiers an effective form of hand-to-hand combat in a life or death situation, but also law enforcement officials in the art of restraint and control when dealing with hostile civilians.

In World War II, Lieutenant Junior Grade Wesley Brown developed a manual to teach Navy pilots the art of hand-to-hand combat. Brown was a self-defense instructor tasked with preparing pilots. Titled the *U.S. Navy Aviation Hand-to-hand Combat Manual*, informally known as the "*V-Five Program*," the techniques are similar to Fairbairn, Underwood, and Applegate's manuals. In the manual, Brown recognizes the critical need for hand-to-hand combat training. Also similar to other manuals, the manual

varies in degrees of self-defense techniques from life threatening situations, to subduing an attacker. This manual is one of the only examples of the Navy's attempt to having a consistent combatives program. In 1951, Lieutenant Commander Brown refined the techniques he devised with the *V-Five Program* and printed a book titled, "*Self-defense*." Written during peacetime, *Self-defense's* intent was to maintain hand-to-hand combat skills previously learned in World War II.

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